Farm Lane, Shurdington, Gloucestershire

Archaeological Excavation Report

March 2020

Client: Redrow Homes

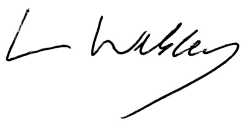
Issue No: 1

OA Reference No: 7317

NGR: SO 9357 1945

oxfordarchaeology

southsouthsouth

Client Name:	Redrow Homes
Document Title:	Farm Lane, Shurdington, Gloucestershire
Document Type:	Excavation Report
Grid Reference:	SO 9357 1945
Planning Reference:	14/00838/FUL
Site Code:	SHU15 and SHU17
Invoice Code:	SHUPX
Receiving Body:	Cheltenham Museum and Art Gallery
Accession No.:	CAGM:2015.4
OA Document File Location:	X:\I\Leckhampton_Farm Lane_Gloucestershire\012PX_analysis\Report
OA Graphics File Location:	\\10.0.10.86\invoice codes r thru z\S_codes\SHUPX
Issue No:	1
Date:	February 2020
Prepared by:	Andrew Simmonds (Senior Project Manager) and Kate Brady (Project Officer)
Checked by:	Andrew Simmonds (Senior Project Manager)
Edited by:	Leo Webley (Head of Post-excavation)
Approved for Issue by:	Leo Webley (Head of Post-excavation)
Signature:	

OA South
Janus House
Osney Mead
Oxford
OX2 0ES

t. +44 (0)1865 263 800

OA East
15 Trafalgar Way
Bar Hill
Cambridge
CB23 8SG

t. +44 (0)1223 850 500

OA North
Mill 3
Moor Lane Mills
Moor Lane
Lancaster
LA1 1QD
t. +44 (0)1524 880 250

e. info@oxfordarch.co.uk
w. oxfordarchaeology.com
Oxford Archaeology is a registered Charity: No. 285627

Farm Lane, Shurdington, Gloucestershire

Archaeological Excavation Report

Written by Andrew Simmonds, Kate Brady and Ken Welsh

With contributions from Paul Booth, Lee G Broderick, Sharon Cook, John Cotter, Michael Donnelly, Lynne Keys, Julia Meen, Rebecca Nicholson, Cynthia Poole, Ian R Scott and Ruth Shaffrey, and illustrations by Charles Rousseaux, Aidan Farnan and Magdalena Wachnik

Contents

List of Figures

Summary

Excavations on land west of Farm Lane, Shurdington, Gloucestershire, uncovered evidence for a small Neolithic/early Bronze Age flint scatter and an agricultural landscape that was in use from the middle to late Iron Age until the end of the 2nd century AD. During the Iron Age the settlement was focused on a triangular enclosure that contained at least one roundhouse and a four-post structure, as well as an area of possible open settlement or livestock pens. The roundhouse was associated with radiocarbon dates of 370–160 and 200–40 cal BC. The Iron Age settlement appears to have been predominantly pastoral, exploiting the wet grassland of the clay vale, with an economy based on sheep with a smaller number of cattle and an unusually large number of pigs, but no evidence for cultivation of crops, though plant remains may simply not have been deposited in locations that rendered them archaeologically recoverable.

The Iron Age settlement was replaced during the second half of the 1st century AD by a much more extensive, polyfocal arrangement of enclosures, representing a significant increase in agricultural production that included arable and an increase in cattle and horses at the expense of sheep/goats and pigs. The location of the former enclosure remained the site of domestic occupation, now within a square enclosure, although no buildings were identified. A second domestic focus was identified from an artefactual concentration within an enclosure complex that extended beyond the western limit of the site, where evidence for crop processing and an oven or kiln of possible industrial function were located in association with a post-built building. The settlement was abandoned around the turn of the 2nd and 3rd centuries, perhaps due to the development of a possible villa at Brizen Playing Fields a short distance to the west. Thereafter a continued Roman presence on the site was indicated only by a small number of (mostly unstratified) artefacts.

A total of seven inhumation burials and two cremation burials were found, several of which were situated within or close to a 2nd century enclosure that may have had a funerary function.

Of particular note among the artefactual material were a very rare silver coin of the Dobunnic ruler Eisu and an irregular denarius of Titus bearing a hitherto unattested legend.

Field boundary ditches and a corn-drying oven dating from the mid 11th to mid 13th centuries were probably associated with the medieval settlement that preceded the adjacent Brizen Farm, and ridge and furrow cultivation was also in evidence.

Acknowledgements

Oxford Archaeology would like to thank Nick Shepherd, Steve Weaver and Nick Cooke of RPS for commissioning this project on behalf of Redrow Homes and for their support and cooperation throughout the work. Thanks are also extended to Charles Parry, who monitored the work on behalf of Gloucestershire County Council, for his advice, guidance and patience.

The project was managed for Oxford Archaeology by Ken Welsh and the post-excavation analysis was managed by Andrew Simmonds. The fieldwork was directed by Phil Wright, who was supported by Mike Sims and Ben McAndrew, and Ashley Strutt supervised the watching brief. Survey and digitising was carried out by Conan Parsons. Aidan Farnan drew Figures 3, 4, 7-15, 20 and 26, Charles Rousseaux drew Figures 1, 16, 18, 19 and 28, and Magdalena Wachnik took the photographs of the artefacts for Figures 29–34.

Thanks are also extended to the teams of OA staff that cleaned and packaged the finds under the management of Leigh Allen, processed the environmental samples under the management of Rebecca Nicholson, and prepared the archive under the management of Nicola Scott.

1 INTRODUCTION

1.1.1 Oxford Archaeology (OA) were commissioned by Redrow Homes to undertake a programme of archaeological investigation at the site of a residential development on land west of Farm Lane, Shurdington, Gloucestershire (centred on NGR SO 9357 1945; Fig. 1). The site had been demonstrated to have archaeological potential by the results of a magnetometer survey and trial trench evaluation, which had uncovered features of Iron Age and Roman date (ASDU 2006; Cotswold Archaeology 2006). The investigation comprised ten areas of strip, map and sample excavation and four areas that were subject to watching brief.

1.1.2 The work was undertaken as a condition of planning permission (planning ref. 14/00838/FUL). Although the local planning authority did not set a brief for the work, discussions with their archaeological advisor, Charles Parry, established the scope of work required for the mitigation (CgMs 2015) and the associated watching brief (OA 2016).

1.2 Location, topography and geology

1.2.1 The development site comprised an area of *c* 15.4ha located between the villages of Shurdington and Leckhampton, on the southern outskirts of Cheltenham (Fig. 1). It comprised four contiguous pasture fields that were separated by incomplete hedgerows, bounded to the south by Leckhampton Lane, to the east by Farm Lane, to the north by the back gardens of properties fronting Nourse Close and Brizen Lane, and to the west by fields.

1.2.2 The site is situated at the eastern edge of the Severn Valley in the shadow of the Cotswold escarpment, the nearest part of which is Leckhampton Hill, the foot of which lies *c* 500m to the south-east (Fig. 2). The valley floor is a landscape of gently rolling farmland and the site exhibited a distinct slope from south-east to north-west, and from east to west away from Farm Lane, with a highest point of *c* 90m above Ordnance Datum (aOD) at the junction of Leckhampton Lane and Farm Lane falling away to *c* 75m aOD to the north-west.

1.2.3 The underlying geology comprises mudstones of the Blue Lias Formation and Charmouth Mudstone Formation that make up the floor of the valley, with occasional islands of fan gravel, the nearest of which lies beneath Leckhampton and extends into the fields east of Farm Lane (British Geological Survey nd). The geology gives rise to rich loamy/clay soils with impeded drainage (Cranfield University nd). Many streams drain off the Cotswolds escarpment and run westward across the valley to the River Severn, including the River Chelt and, closer to the site, the Ham Brook to the west and the Hatherley Brook to the east.

1.3 Archaeological and historical background

1.3.1 The site lies in an area that has seen substantial archaeological investigation in association with proposed developments (Fig. 1).

1.3.2 The site itself had been subject to a programme of investigation including a desk-based assessment (CgMs 2002), geophysical survey (ASDU 2007; Fig. 3) and a trial-trench evaluation comprising 49 trenches (Cotswold Archaeology 2006). In addition to this, trial-trench evaluation has been carried out on the fields adjacent to the west at Brizen Farm (OA 2008) and at the site of a proposed new Cheltenham Secondary School on the east side of Farm Lane (OA 2019a). Cotswold Archaeology undertook an extensive evaluation to the north of the Secondary School site in 2012, comprising a total of 78 trenches (Cotswold Archaeology 2012), and a group of fields to the south-east have been investigated by geophysical survey (Stratascan 2015).

1.3.3 Evidence for activity before the Iron Age in the immediate area is very limited, being largely restricted to occasional finds of worked flint from the evaluation trenching at the site and at Brizen Farm and the Cotswold Archaeology evaluation. It is possible that the mobile populations of the Mesolithic and Neolithic periods largely avoided the clay vale except for short-term, task-specific visits, although their presence in the wider area is amply demonstrated by the proximity of the causewayed enclosure at Crickley Hill and Crippets Long Barrow near Ullenwood, both *c* 2.5–3km south of the site. The earliest identified permanent settlements in the Severn Valley date from the Bronze Age, but again no evidence has been found in the surveys around Farm Lane. The nearest find is a Beaker that was found *c* 900m to the east within Leckhampton, and a bowl barrow is located on Leckhampton Hill.

1.3.4 The site is overlooked from the south-east by Leckhampton Camp hillfort, and Iron Age remains are in evidence at the site and in the surrounding area. The geophysical survey and evaluation identified three concentrations of Iron Age activity within the site, comprising a settlement enclosure near the north-eastern limit (Area 1), possible ring gullies in the south-western field (Area 5) and some residual sherds to the north-west (Area 2). Iron Age ditches were also recorded at Brizen Farm, in the field adjacent to the site, and in the north-western part of the proposed Cheltenham Secondary School site, where features included a possible enclosure ditch. Elsewhere in the Severn Valley, settlements became more numerous throughout the Iron Age, including an early Iron Age open settlement of post-built roundhouses at nearby Hucclecote Link Road (Thomas *et al*. 2003) and evidence for later settlements at Arle Court, Cheltenham, and Bishop's Cleeve (Cutlett 2010; Nichols 1999). It is at the end of the Iron Age that Gloucestershire makes its first appearance in recorded history, as part of the land occupied by the Dobunni, who are recorded by Dio Cassius as surrendering to the invading Roman forces in AD 43.

1.3.5 The evaluation indicated that features and finds of Roman date were far more numerous and extensive at the site than those of earlier periods. A complex of large rectangular enclosures encompassed much of the southern part of the site (Areas 4–7) and further boundaries and associated features were recorded extending up the western edge (Areas 3 and 4). Boundary ditches were also recorded in the central part of the site (Area 2), a group of features including an oval enclosure and a D-shaped enclosure was located in the south-east part of the site (south of Area 6), and the Iron Age activity in the north-east part of the site (Area 1) also continued into the Roman period. Particularly intriguing were two Severn Valley Ware pottery vessels that had

apparently been buried complete but did not contain any evidence for cremation deposits (Cotswold Archaeology 2006).

1.3.6 The Roman activity on the western side of the site evidently extended into the adjacent fields, where the evaluation at Brizen Farm recorded boundary ditches, pits and postholes, as well as a second area of Roman features to the north of Brizen Lane (OA 2008). The area of Iron Age activity at the proposed Cheltenham Secondary School site also continued in use into the Roman period (OA 2019a), and a single boundary ditch was uncovered at the Cotswold Archaeology evaluation to the north (Cotswold Archaeology 2012). Further, and perhaps more significant, Roman remains were found to the north-west of the A46 Shurdington Road, 400m from the site, where metal detector finds in 1995 at Brizen Playing Fields prompted a watching brief that recorded two possible ditches and a possible wall. Pottery, a ring and a brooch were also recovered. Unfortunately, the site was only investigated after it had been looted by illegal metal detectorists, who apparently discovered and removed up to 200 4th-century coins, allegedly including a hoard within a broken vessel (Gloucester and District Archaeological Research Group 1996).

1.3.7 Rural farmsteads of the Roman period have been identified throughout the Severn Valley, and the area around Cheltenham is no exception. A settlement and rectilinear enclosure complex was excavated north of the town centre at West Drive/Wellesley Road, and a watching brief 100m to the east revealed pits and ditches that are probably part of the same establishment (Catchpole 2002; Sausins 2012), while part of an enclosure ditch has been excavated at Arle Court (Cutlett 2010). A similar enclosure complex has been excavated at Hucclecote Link Road to the south-west and a large area of agricultural landscape has been investigated at Bishop's Cleeve to the north (Thomas *et al*. 2003; Holbrook 2006, 109). All these sites are likely to have fallen within the administrative hinterland of the colonia at Gloucester, 10km west of the site.

1.3.8 Both Leckhampton and Shurdington are likely to have had origins in the late Saxon period. The historic core of Leckhampton probably lay around the parish church of St Peter, *c* 600m east of the site. A medieval moated manor site has been investigated in this area at Church Farm (Clift 1933), and a similar interpretation has been proposed for features identified at Brizen Farm. Although now in the parish of Shurdington, the site was historically within the parish of Leckhampton and lay within the open fields used for arable west of the village, as evidenced by the surviving ridge and furrow earthworks (Moore-Scott 1999, fig. 3). It had been enclosed and the landuse changed to pasture by the time of the 1835 tithe map, and remained thus up to the time of the excavation.

1.4 Excavation methodology

1.4.1 The archaeological investigation primarily comprised strip, map and sample excavation over the whole area of the site where groundworks were planned to take place and had the potential to impact on buried remains. Based on the results of the geophysical survey and trial-trenching the site was divided into areas of predicted high (Areas 1 to 6; Fig. 4) and low (Areas 7 to 10) potential, the former containing features identified

in the geophysical survey which were also confirmed in the evaluation trenching and the latter either containing features that were identified by the geophysical survey but not confirmed by trenching, or being blank of features. Within this overall strategy the scope and scale of work was assessed on an iterative basis: Areas 1 to 6 were targeted for priority investigation and the whole of each area was excavated, Areas 4 and 5 being extended until they joined up to expose features that extended into the intervening area and Area 6 being extended to the north to investigate the extent of the boundary ditches here; in the areas of low potential, excavation of test trenches in Areas 9, 10 and the western part of Area 7 indicated that there were no archaeological remains present and consequently no further work was undertaken in these areas. A more substantial area was investigated in Area 8, which was extended until it was clear that the archaeological features had ran out. Four areas were investigated under watching brief conditions to investigate the continuation of boundary ditches to the north of Excavation Areas 3 and 7 (WB1 and WB4), the removal of a hedgerow that extended through Area 2 (WB2), and the corridor of an access road to Leckhampton Lane (WB3). The excavation areas totalled *c* 4.5ha and the watching brief areas *c* 0.8ha.

1.4.2 Two areas on the southern edge of the site were retained as open grassland and were not available for investigation, as was a strip on either side of a retained hedgerow between Areas 6 and 8 and a strip of woodland in the north-east corner of the site, facing onto Farm Lane.

1.4.3 In the excavation areas the topsoil and overburden were removed to the top of archaeological deposits by a mechanical excavator using a toothless bucket operating under archaeological supervision (Figs 5 and 6). The exposed area was hand-cleaned to define all archaeological features present. All archaeological deposits were excavated by hand and recorded stratigraphically in accordance with OA's standard recording procedures and the WSI (CgMs 2015). Significant archaeological horizons were subject to the production of a pre-excavation site plan. All features and spoil heaps were scanned with a metal detector in order to enhance recovery of metal artefacts.

1.4.4 In the watching brief areas excavation and recording proceeded in the same way, but the sampling levels for the boundary ditches was lower.

1.4.5 The burials were recorded by rectified photography and excavated under the terms of a Home Office licence under supervision of an experienced osteoarchaeologist and in accordance with OA standard procedures.

2 RESULTS

2.1 Phasing

A sequence of five main phases and three sub-phases was established on the basis of stratigraphic relationships and artefactual dating evidence, chiefly pottery but also including the small number of stratified coins and brooches. The phases thus defined comprised:

Phase 1: Mesolithic to Bronze Age

Phase 2: Middle to late Iron Age

Phase 3: Roman

Phase 3a: Early Roman

Phase 3b: Middle Roman

Phase 3c: Late Roman

Phase 4: Medieval

Phase 5: Post-medieval

2.2 Phase 1: Mesolithic to Bronze Age

2.2.1 A single microlith was residual in a later feature and represents the only artefact of Mesolithic date from the site.

2.2.2 No cut features were dated to the Neolithic period, and no pottery of Neolithic date was recovered, but flint scatter 1145, revealed overlying the natural in the eastern part of Area 1 (Fig. 10), consisted of 27 flints. The scatter was dominated by flakes and also included a multi-platform flake core. The scatter included a knife and is likely to date to the late Neolithic to early Bronze Age.

2.2.3 Other flints were recovered individually or in small groups and were residual in later features.

2.3 Phase 2: Middle to late Iron Age (*c* 200 BC–AD 70; Fig. 7)

2.3.1 Iron Age activity comprised a small enclosed settlement in Area 1, less clearly defined activity in Areas 2 and 5 that could be either domestic in character or represent livestock pens, and a possible boundary ditch in Area 6.

Area 1 (Fig. 10)

2.3.2 The focus of activity was a settlement on the higher ground of Area 1, consisting of at least one roundhouse and possible animal pens set within a larger enclosure. The enclosure was roughly triangular, defined by curving ditches 9114 and 9115 with a rounded corner in the south-east. An entrance *c* 3.5m wide was situated in this south-east corner. The enclosure measured *c* 55m E-W and 46m N-S and the ditches were up to 0.9m wide and 0.45m deep (Fig. 16). The enclosure appeared to be open to the north-west, although the western end of ditch 9115 exhibited a short return that may

indicate that the boundary was continued by other means, such as a fence or hedgeline. Pottery from the earlier fills of the ditches dated to the late Iron Age. Extending from the southern side of the enclosure was a small sub-rectangular enclosure (9116) that measured 15 x 11m. The western side of the sub-enclosure was partly obscured by a larger tree-throw hole, but there appeared to be an entrance at least 3m wide, only the northern side of which survived. The surviving ditch terminal ended in a posthole, suggesting that the entrance was marked by a post structure or gate. A small amount of pottery of late Iron Age and Roman date was recovered from the upper fills of its ditch, but it is most likely that this accumulated after the ditches had gone out of use. Two small, shallow pits (1483 and 1703) were situated a short distance within the entrance; a large storage vessel had been set upright in pit 1483, although only the base survived, and pit 1703 contained more than 0.5kg of highly fragmented pottery.

2.3.3 The area within the enclosure contained several features that were probably contemporary with its use. In the central area a penannular gully defined the footprint of a roundhouse (9117; Fig. 17). The gully enclosed measured *c* 14m in diameter with an entrance on the western side marked by a break in the gully and two postholes (1546 and 1601) *c* 2m apart that may have supported the doorposts. Charcoal from the gully was radiocarbon dated to 370–160 cal BC (SUERC-87392) and a sample from posthole 1546 produced a date range of 200–40 cal BC (SUERC-87393; Table 21). At the centre of the building was a stone hearth (1680) constructed of heat-scorched and cracked limestone fragments set into a shallow sub-rectangular pit measuring 0.75m x 0.65m. The limestone pieces were irregularly scorched and it appeared that some unburnt stones were replacements. Six further postholes were situated near the inner edge of the gully, probably representing the locations of posts that had supported the roundhouse wall. Evidence for an oven within or close to the building was provided by fired clay from posthole 1601, in the form of wattle impressions possibly from a suspended floor. Fired clay from the roundhouse gully included a fragment of flat oven plate as well as a piece of oblong, pierced hand-squeezed lump of fired clay which may have been used as an ad hoc oven or kiln support.

2.3.4 On the north-eastern side of the roundhouse were the more ephemeral remains of another small enclosure (9113/ 9112), perhaps another roundhouse or livestock pen. The enclosure measured 14.7m long (NW-SE) and 11.7m wide (NE-SW) and the gully was 0.45m wide and 0.3m deep. Two short segments of ditch (9106), associated with a large posthole (1137), were situated *c* 14m to the west of the roundhouse, aligned with the doorway. Pottery recovered from this feature was consistent with that recovered from the main ditch, being middle to late Iron Age in date.

2.3.5 In the southern part of the enclosure was a probable four-post structure (1036). The postholes were situated on either side of sub-enclosure ditch 9116 but in the absence of a stratigraphic relationship it was not possible to be certain which feature was earlier. No finds were recovered from the postholes.

2.3.6 At the far northern edge of the excavation area were several ditches that suggest that the settlement extended beyond the northern limit of excavation. Relationships between features were not entirely clear but analysis suggests that the south-eastern

part of a ring gully (9108) enclosed an area 6.3m in diameter but the full size of the enclosed space is likely to have been larger. Two terminals suggest a gap in the ditch in the south-east measuring 0.8m wide. The ditch itself was 0.7m wide and 0.3m deep. Its two homogenous silty fills contained 0.5kg of pottery of middle to late Iron Age date. Two narrow ditches (9107 and 9110) were located on the outside of the ring ditch and may have been part of an enclosure surrounding it and extending to the east. They were narrow and shallow, measuring up to 0.5m wide and 0.2m deep. Each contained a few sherds of pottery of middle to late Iron Age date. Pit 1391 truncated ditch 9110 and another pit (1425) was truncated by the ditch. Both pits contained a small amount of pottery of middle to late Iron Age date.

Area 2 (Fig. 11)

2.3.7 A possible roundhouse or stock pen was situated *c* 130m south-west of the Area 1 enclosure. This was an oval enclosure constructed of two concentric ditches. The outer ditch (9134) enclosed measured 18m (NW-SE) x 15m (NE-SW) with a break 1.6m wide on the north-eastern side that may be an entrance. The ditch measured 0.45m wide and 0.14m deep. The inner ditch (9135) was only partially preserved but was concentric with the outer ditch and had a projected diameter of *c* 10m. It was narrower and shallower than the outer ditch, measuring 0.25m wide and 0.08m deep. Pottery was recovered from both of the ditches and indicates that the features infilled in the late Iron Age, with final infilling taking place in the early Roman period. Evidence for metalworking associated with or in the vicinity of the structure was provided by occasional fragments of hammerscale flake, a tiny quantity of undiagnostic slag and slag runs in the fill of gully 9135, and fired clay with vitrified surfaces recovered from gully 9134.

Area 5 (Fig. 14)

2.3.8 In the far south of the site were the partial remains of another probable roundhouse or small concentric-ditched enclosure. The south-eastern sections of two concentric ditches were revealed (9172 and 9173), enclosing an area measuring *c* 14m in diameter. Pottery recovered from both gullies dated to the late Iron Age to early Roman period, with no certainly post-conquest material. Several fairly deep postholes within the area thus enclosed may have held structural posts, although the features were undated. The stratigraphically later two were not dated. To the east of these features was a large, shallow, irregular-shaped feature (5173) which may have been a tree-throw hole.

Area 6

2.3.9 In one intervention through a sequence of large ditches that defined the eastern boundary of the Roman southern enclosure complex, the earliest cut (6065) contained Malvernian ware pottery and no post-conquest material. This may suggest that the earliest iteration of this boundary dated to the middle to late Iron Age, although alternatively it is possible that the sherds are residual and the ditch Roman. This earliest cut was later truncated by recuts in the early Roman and middle Roman periods.

2.4 Phase 3: Roman (Fig. 8)

2.4.1 Roman features were more widespread than their Iron Age precursors, occurring in most of the excavation areas. The Iron Age enclosure in Area 1 was replaced by an enclosure that was almost square in shape, a boundary ditch and enclosure extended across the middle of the site in Area 2, and the enclosure complexes that had been identified in the western and southern parts of the excavation area by the geophysical survey were uncovered, the northern complex in Areas 3 and 4 and the southern complex encompassing Areas 5–8. Most of these features were probably established in a single episode at the start of Phase 3a, but surviving evidence for the boundaries in this phase was discontinuous, only appearing where they had not been truncated by recutting of the ditches during Phase 3b.

Phase 3a: Early Roman (c AD 70–120)

Area 1 (Fig. 10)

2.4.2 A new enclosure, almost square but with a trapezoidal south-eastern corner, was constructed over the footprint of the Phase 2 Iron Age enclosure. Most of the original enclosure ditch was truncated by a recut in Phase 3b and consequently the ditch (9104) was only substantially seen on the western side. Only glimpses of the ditch were observed in interventions elsewhere in the circuit, most clearly in the south-east corner (9100 and 9102; Fig. 18, section 1029). Elsewhere, much of this earliest fairly shallow enclosure ditch could not be seen in the excavated sections and had presumably been wholly replaced by the wider Phase 3b ditch. The enclosure measured 55m (N-S) x 52m (E-W) and pottery groups from the fill dated to AD 40–100.

Area 2 (Fig. 11)

2.4.3 A boundary ditch extended across the area on a NNW-SSE alignment, with a shallower recut on the same alignment but slightly to the north (9139/9140; Fig. 18, section 2000). Ditch 9140 contained a small amount of pottery of late Iron Age to early Roman date and it is likely that both ditches represent a boundary that evolved over this period. A ditch that was exposed to the west in Area 7A but not excavated may be a continuation of this boundary.

Area 4 (Fig. 13)

2.4.4 Area 4 contained a substantial L-shaped boundary, defining the south-eastern corner of the northern enclosure complex, with a smaller enclosure within its corner. The boundary was represented by ditch 9152, which extended for 55m and continued beyond the edge of the site, and to the north by ditch 5674, which extended only a short distance before it was obscured by a Phase 3b recut and a group of medieval furrows (Fig. 18, section 5205). The smaller enclosure measured *c* 15 x 15m and was defined by ditch 9156, with no internal features and no indication of an entrance. Both ditches contained pottery assemblages dating to AD 40–100.

Area 5 (Fig. 14)

2.4.5 It is probable that ditch 9174, which defined the western boundary of the southern enclosure complex, existed during this phase, although the dating evidence from the surviving iteration of the ditch dated from Phase 3b. Ditch 9170, which branched off ditch 9174 and extended eastward for *c* 25m to define an enclosure at the south-wester corner of the complex, contained an assemblage of pottery dating to the early Roman period. The ditch had a concave, steep profile, measuring 1.4m wide and 1m deep.

2.4.6 South of this boundary, two curving ditches (9171 and 9175) appeared to form a sub-enclosure. The gap between their terminals may have been an original entrance, although this would be extremely wide at 12.7m. Ditch 9175 contained a fragment of a saddle quern, probably used as a mortar or grinding stone.

2.4.7 Ditch 5180 was situated to the north of boundary ditch 9170 and its full extent was not clear due to heavy disturbance of this area by medieval furrows. The remnant of this ditch curved from south to north-east and may have formed part of a subdivision within the enclosure on this side of the boundary. A very large but fragmentary vessel (SF 502; 471 sherds, 11,964g) was recovered from the southern terminus of the ditch.

Area 6 (Fig. 14)

2.4.8 The eastern boundary of the southern enclosure complex in Areas 5–8 was identified in Area 6 as a large N-S ditch (9182). It was one in a sequence of four ditches and recut late Iron Age (Phase 2) ditch 9179. The ditch measured up to 3.7m in width and survived to a maximum depth of 1.5m, although in other interventions it was narrower and shallower, probably due to truncation. An irregular spread of soil (6289) that extended from the west side of the ditch in the north part of the excavation area, filling a slight hollow that measured 5 x 4m and up to 0.18m deep, contained a small quantity of animal bone and pottery, as well as a piece of worked flint. Smaller ditches divided the area to the west of the boundary, including ditches 6034, 9302 and 9303. These ditches all contained pottery assemblages dating to AD 40–100. The ditches were all fairly consistent in size, measuring *c* 1.8m wide and up to 0.5m deep.

2.4.9 Two burials (6356 and 6357) were found side-by-side in the upper ditch fill at the junction of ditch 9182 with subsidiary ditch 9302 (Fig. 26). No grave cuts could be identified, although this may simply be due to the similarity of the fills to that of the ditch. Burial 6356 was aged 13–17 years and had been significantly affected by ploughing, which had removed much of the skeleton and caused fragmentation of what remained. Skeleton 6357 was better preserved and was a probable male aged 26–35 years. Both had been buried in a crouched posture with the head to the south.

2.4.10 Close to the burials the fill of the ditch was also cut by a circular pit (6410) that was 0.7m in diameter and 0.27m deep. The single fill (6411) contained a few sherds of pottery and charred plant remains representing crop-processing debris and grass.

2.4.11 An irregular group of features in the south-eastern corner of the excavation area, possibly short lengths of ditches, contained material of varied date, but four (6183, 9191, 9192 and 9194) contained groups of pottery dated to the early Roman period. Unphased ditch 9193 may also be contemporary.

Area 7 (Fig. 15)

2.4.12 Ditch 9182 continued northward into the watching brief area in Area 7, where, after a break of 22m, it was recorded as ditch 9198. Here it curved toward west to form the north-east corner of the enclosure complex. Pottery from the ditch dated to AD 40–150. No relationship was observed between this boundary and ditches 9197 and 10226, but it is likely that they branched off the west side and formed internal divisions within the enclosure complex.

2.4.13 Pit 10054 was the only feature located east of the enclosure boundary. It measured 2.3m in diameter and 0.48m deep, and contained two early Roman sherds.

Area 8 (Fig. 14)

2.4.14 The enclosure in the south-eastern corner of the enclosure complex was enclosed by an E-W boundary ditch that extended from the western side of ditch 9180 in Area 6 and into Area 8. Here there were four phases of ditch (Fig. 19, section 6022). The ditch turned toward south and continued beyond the excavation area (9178). The southern limit of the southern enclosure complex was revealed in Watching Brief Area WB3 to the south of this area. Two shallow ditches on a rather oblique alignment (9196 and 10006) were cut by a more substantial ditch (9195) that was 2.6m wide and 0.94m deep. The enclosure thus defined measured *c* 60 x 60m. The western boundary ditch (9178) was cut by a shallow pit (8053).

Phase 3b: Middle Roman (c AD 120–250)

2.4.15 The features that were established during Phase 3a mostly continued in use during this phase. In many instances the boundary ditches were recut, including the Area 1 enclosure and the complex in Area 4. An enclosure was constructed against the boundary in Area 2, and the rectilinear enclosure complex that had been identified by the geophysical survey in Areas 5–8 was certainly in use by this time.

Area 1 (Fig. 10)

2.4.16 The Phase 3a enclosure was completely recut in this period (9103), removing much of the evidence for the original ditch. The ditch was consistent in size around the enclosure, measuring up to 2m wide and 0.6m deep (Fig. 19, sections 1025 and 1029). A blocked entrance was identified in the centre of the north side. The entrance was c 7m wide and had been blocked by the digging across it of a gully 0.178m deep. Repeated recutting and remodelling of the circuit at the south-east corner had created a more complicated stratigraphic sequence, the south side ending in a northward return of *c* 10m and the eastern side wrapping around it. The effect of this arrangement was to produce a passage between the ditches through which the enclosure may have been accessed, although in places this was less than 1m wide. Pottery groups recovered from the enclosure ditch dated to AD 120–150 or more widely to AD 120–200. Other finds recovered included a whetstone (SF 121), and a smithing hearth bottom, attesting to metalworking in the vicinity.

2.4.17 Rectilinear sub-enclosures attached to the east side of the main enclosure were defined by ditches 9119, 9120 and 9129. Within one of these enclosures, L-shaped

ditch 9121 lay on a rather oblique angle and its function was uncertain. The pottery assemblage from these ditches was consistent with the pottery dates from the main enclosure ditch and dated to AD 120–150. A ditch along the eastern edge of the excavation area (9130) was similarly dated by pottery and its co-alignment with the eastern side of the enclosure suggests that they were broadly contemporary.

2.4.18 The only discrete feature within the enclosure that was dated to this phase was a small pit (1067) located more or less centrally. The pit was only 0.25m across and 0.08m deep.

2.4.19 A U-shaped ditch (9308) that extended from the south-east corner of the enclosure may have formed a small animal pen, although the stratigraphic relationship was not certain and it is possible that the ditch was an earlier, discrete enclosure of Iron Age date.

2.4.20 A broadly sub-circular feature (1492) was situated close to ditch 9130. It was irregular in shape and quite shallow, measuring 1.5m in diameter and 0.25m deep. Sherds of pottery recovered from this fill dated to after AD 120.

Area 2 (Fig. 11)

2.4.21 A sub-rectangular enclosure defined by ditches 9141, 9142 and 9145 was attached to Phase 3a boundary ditch 9140, with the north-eastern side of the enclosure partially recutting the earlier boundary. The enclosure measured 60 x 28m. No evidence was found for an entrance or internal occupation, although part of the eastern half of the enclosure was not seen within the watching brief area, where it may have been completely destroyed by a modern field boundary and associated treeline. The pottery assemblage from the main ditch of the enclosure dated to AD 120–150. The eastern side of the enclosure was formed by ditch 9142 and the pottery assemblage from here dated to AD 150–200 suggesting that infilling continued into the second half of the 2nd century. Ditch 9143, aligned parallel with the eastern side of the enclosure, also contained a pottery assemblage of middle Roman date, including a decorated samian ware sherd more closely dated to AD 145–170.

2.4.22 The only features within the enclosure were two inhumation burials (2077 and 2111) and three pot burials (1905, 2104 and 2108). In addition to this, an urned cremation burial (2024) was inserted into the enclosure ditch and a third inhumation burial (2004) and an unurned cremation burial (2070) were situated a short distance outside the enclosure. Several other possible features were investigated and found to be undated tree-throw holes.

2.4.23 Graves 2077 and 2111 were situated within the south-east corner of the enclosure. Grave 2077 (Fig. 20) was aligned N-S and was rectangular in shape but appeared to have been disturbed as it was irregular and badly defined in some areas, most notably at the northern end. The southern end cut the edge of the enclosure ditch. It measured 1.85 x 0.5m and survived to 0.09m in depth. It contained skeleton 2078, an adult of undetermined sex, buried supine and extended with the head to the north. The skeleton had been heavily truncated due to the shallowness of the grave. The grave

was backfilled with deposit 2079, which contained five sherds of pottery (29g) dated after AD 120.

2.4.24 Grave 2111 (Figs 20 and 21) was almost circular. It measured 1.7 x 1.3m and was 0.24m deep. It contained the skeleton of a possible male young adult aged 18–25 years (2112), who was buried in a tightly crouched position, on his back with the head to the north, and turned slightly towards the east. Footwear was represented by two clusters of hobnails (SF 204 and 208) found in the area of the feet. Other finds recovered from the grave were a copper alloy hairpin (SF 201/202) and a group of iron nails and tiny unidentified fragments (SF 206–207, 209–213 and 215) which may represent the remains of a simple wooden box. The grave was backfilled with deposit 2113, which contained 58 sherds of pottery (284g) dating to AD 120–200. This included a sherd that had been deliberately trimmed, possibly for use as a counter. A radiocarbon determination of cal AD 170–190 or cal AD 210–390 was obtained from the skeleton (SUERC-87391; Table 21).

2.4.25 Two pot burials comprised almost whole Severn Valley ware vessels that were buried in small pits (2104 and 2108; Figs 22 and 23) close to the northern boundary of the enclosure. There was no cremated bone or other material present within the fills. The upper parts of both vessels (SF 205 and 2107) had been lost to plough-truncation and consequently their forms could not be defined. The pots could only be broadly dated to the Roman period but their burial in the area of inhumation and cremation graves is significant and they may have been intended as cenotaphs. A similar vessel (1904) was recorded in a pit (1905) in the south-eastern corner of the enclosure during the evaluation (Cotswold Archaeology 2006).

2.4.26 Cremation burial 2024 was buried within a Severn Valley ware jar in the upper part of the fill of the western ditch of the enclosure. The vessel had been truncated by ploughing and only 22.7g of bone was present. The age and sex of the individual could not be determined. While the pot has been dated to AD 80-200, a surprisingly early radiocarbon determination of 50 cal BC–cal AD 90 was obtained from the cremated bone (SUERC-87390; Table 21). The dating of this burial is discussed further below.

2.4.27 Inhumation grave 2004 (Fig. 20) was situated to the east of the enclosure, close to ditch 9143. It was aligned N-S and was rectangular with rounded corners. It measured 0.86 x 0.54m and survived to a depth of 0.12m. It contained skeleton 2005, a possible female prime adult (26–35 years), who was buried supine and extended with the head to the north. Hobnails (SF 200) were found in the area of the feet. The grave was backfilled by deposit 2006, which contained occasional fragments of burnt animal bone. Pottery from the backfill dated to AD 120–200.

2.4.28 To the north of the enclosure, cremation burial 2070 was oval in shape and measured 0.37m x 0.28m and only 0.03m deep, probably having been heavily truncated. It contained a deposit of cremated bone (2069) that weighed only 4.6g. The age and sex of the individual could not be determined.

2.4.29 A pit (2026) near the western edge of the excavation areas that cut ditches 9139 and 9140 measured 1.85m in diameter and 0.28m deep and contained some cattle and sheep/goat bones but no artefactual material.

Area 3 (Fig. 12)

2.4.30 Ditches 9199 and 10225 extended across the northern end of Watching Brief Area WB1, to the north of the excavation area. They followed very straight, parallel alignments a little over 8m apart and may represent part of a trackway flanked by a pair of drainage ditches. A few sherds of 2nd century pottery were recovered from the fills.

Area 4 (Fig. 13)

2.4.31 The boundary of the enclosure complex appears to have been redefined in this period, with a ditch (9153) constructed just outside the earlier ditch, on the same alignment. The latest pottery from this ditch dated to AD 150–200, although sherds dating to the first half of the 2nd century were also recovered suggesting that its use spanned the middle part of the century. To the south, and parallel to ditch 9153, were a further two ditches (9160 and 9161) *c* 5m apart. Both were of a similar size, measuring *c* 1m wide and survived to only 0.1m in depth. Pottery was only recovered from ditch 9160 and this dated to AD 40–200. The outer edge of the early Roman enclosure defined by ditch 9152 was recut a further two times (9154 and 9155) with both measuring just over 1m in width and both slightly deeper than the earlier cut at 0.5m and 0.4m in depth (Fig. 18, section 5205). Pottery dates confirm that both recuts date between AD 120 and 200 and with a closer date from 9154 of AD 120–150. To the north-west short stretches of ditch survived between disturbance by plough furrows.

2.4.32 Two small enclosures in this area also dated to this period. Ditch 9157 defined a small sub-rectangular/oval enclosure. It measured 11.5 x 8m. Its relationship with a short length of ditch (9158) that appeared to sub-divide the interior was uncertain. Pottery recovered from ditch 9157 (36 sherds, 174g) dated to AD 120–200, and two copper alloy finger rings (SF 522 and 523) and a hairpin (SF 506) were also recovered. A shallow pit (5504) that cut the ditch contained a possible millstone fragment. Ditch 9159 formed a semi-circular enclosure against the northern side of ditch 9153, measuring 6 x 20m. There was no pottery recovered from its fill, but its association with ditch 9153 suggests it was in use during this phase. Fired clay fragments were also recovered from this enclosure ditch, and probably originate from an oven or kiln.

2.4.33 To the north, building 5617 was represented by a group of eight postholes in opposing pairs, which may have supported a structure measuring *c* 8 x 2.3m. Immediately adjacent to the building was an oven (5560). The oven was of keyhole shape in plan consisting of a main circular chamber 0.6m in diameter and 0.33m deep with a narrow linear flue 0.55m long projecting to the north-east (Fig. 19, section 5171; Fig. 24). The carbonised plant remains from the fill consisted entirely of charcoal, which included roundwood and oak charcoal, representing the remains of fuel used in its firing. A quantity of burnt stone found on the base of the oven was probably used to maintain the heat. The intensity of firing suggests it was heated to temperatures above those used for domestic cooking. No pottery was recovered from the postholes or the oven. Pit 5579 was situated perpendicular to building 5617 and a short distance to the north-east. The pit was rectangular, measuring 1.0 x 0.8m and had a base lined with flat stone slabs. Its primary fill was rich in charred plant remains, and pottery recovered from the

backfill included sherds dated to AD 120–250 and AD 180–250. The feature may have been related to the use of the oven and structure.

2.4.34 In the northern part of area five large pits (5528, 5550, 5564, 5571 and 5577) contained pottery dating their infill mainly to AD 150–200, but the assemblages also included sherds dating to AD 120–150, demonstrating that there was also earlier 2nd century activity here. Their location, a short distance to the north of the possible post-built structure and oven, may suggest that they were related to the use of the building. Pit 5528 was a shallow oval hollow lined with stone, which produced a few small fragments of oven plate and firebar and could possibly represent another oven or kiln. Charred plant remains from its fill included a large concentration of grass seeds. Other finds from these pits include a worked oolitic limestone ball, possibly used as a weight, from pit 5550. Pit 5564 contained a millstone fragment.

2.4.35 To the east of the enclosures was a small sub-rectangular enclosure (9151), the north side of which had been cut away by medieval ditch 9149. The enclosure measured 6.5 x 4.1m and was defined by a shallow gully 0.5m wide and less than 0.2m deep. Pottery (52 sherds, 492g) recovered from the fill dated to AD 120–150.

Area 5 (Fig. 14)

2.4.36 The western boundary of the enclosure complex was defined by ditch 9174 (Fig. 19, section 5050), which extended for 75m on a N-S alignment from the southern limit of the excavation area. It was a little over 1m deep and terminated abruptly at the north end. Close to the end of the ditch, it was cut by a shallow pit (5003) that had been used to dump a deposit of charcoal (5005). The junction of ditch 9174 and ditch 9170, which branched off ditch 9174 and defined the northern side of an enclosure in the south-western part of the complex, was recut as an L-shaped ditch (9169) that measured *c* 9m N–S and 11m E–W. Beyond the end of this ditch, Phase 3a ditch 9171 was also recut (5113).

2.4.37 A number of features including linear and curvilinear ditches were situated near the end of ditch 9174, although they did not form a definite pattern and their function was uncertain. Several gullies aligned N–S and E–W (5040, 5194, 5315, 9168, 9170) may have formed a series of small rectilinear enclosures, although none of the putative enclosures survived complete. To the east was a group of three slightly curvilinear concentric ditches (9164, 9165, 9166) and several segments of curved gully were also recorded (5022, 9169). The ditches contained small amounts of pottery of broad Roman date and ditch 9164 contained a group more closely dated to AD 120–150. A few features within this area, possibly truncated pits, may have related to its use. Two of these features contained sizeable pottery assemblages dating to AD 150–200, with 152 sherds (563g) from pit 5343, and 64 sherds (359g) from pit 5363 suggesting that these had been used as rubbish pits in the latter half of the 2nd century. Pit 5363 similarly contained a pottery assemblage dating to AD 120-300, and also a fragment of a millstone. Undated ditches 9162 and 9163, situated between these features and those in Area 4, may have been contemporary.

2.4.38 South of ditch 9171 was a group of three intercutting pits (5240, 5242, 5244). The earliest (5240) contained pottery that could only be broadly dated to the Roman period and some burnt animal bone.

Area 6 (Fig. 14)

2.4.39 The Phase 3a eastern boundary of the enclosure complex (9182) was recut on its east side by a substantial ditch (9180; Fig. 19, section 6070). The recut ditch was comparable in size to the earlier one, measuring 2.5m wide and up to 1m deep, with at least five fills. The fills contained pottery demonstrating that the latter stage of infilling occurred in the second half of the 2nd century, but earlier pottery was also recovered including early Roman sherds probably originating from the earlier ditch, and material dating to the earlier part of the 2nd century (AD 120–150), almost certainly representing deposition that took place soon after construction.

2.4.40 The boundary of the enclosure that occupied the south-eastern part of the complex was subsequently cut once again, as ditch 9187, which truncated ditch 9180 and was the latest in the sequence of ditches here (Fig. 19, section 6070). It measured 2m wide and 0.7m deep. Pottery from its fill dated to AD 100–150, providing a *terminus ante quem* in this period for the infilling of the enclosure ditch.

2.4.41 Short sections of surviving ditch (9183–6 and 9188) to the east of 9180 were roughly aligned with it and may represent a trackway on this side, although their alignment is fairly irregular so this is not certain. The north end of ditch 9188 was cut by pit 6076, a wide but shallow feature that measured 2.46m in diameter and 0.24m deep. Pit 6187/6292 was also located in this area and was a substantial feature, measuring 3.6 x 2.5m and 0.46m deep, with a small quantity of early 2nd century pottery. Toward the eastern limit of the excavation area, a little over 50m from the enclosure complex, curving gully 9190 corresponded with the southern side of a circular geophysical anomaly that appeared to be a ring gully *c* 12 m in diameter. The gully was up to 0.34m deep and produced a small quantity of 2nd century pottery.

2.4.42 Immediately to the south of Area 6, a small pit (4703) containing the fragmented remains of a Severn Valley ware pot was encountered in the evaluation. The vessel was suggested to date to the 2nd to 3rd century (Cotswold Archaeology 2006).

Area 8 (Fig. 14)

2.4.43 The enclosure in the south-eastern corner of the enclosure complex was defined by an E–W boundary ditch extended from the western side of ditch 9180 in Area 6 and into Area 8. Here there were four phases of ditch with the latest two (9176 and 9181) infilled during AD 120–240. The recuts were very deep (both 2.2m), again clearly representing a significant enclosure. Ditch 9176 returned to the south forming the western side of the enclosure (9117 and 9178). The central and eastern parts of ditch 9176 had been recut (8011) and included a possible entranceway into the enclosure. The possible entranceway was 2.8m wide and was associated with four postholes (8092, 8094, 8096, 8098) perhaps for a gate.

2.4.44 Two burials (8006 and 8024) were dug into the fill of ditch 9176, both aligned N–S, laterally across the ditch. Grave 8006 (Fig. 26) contained the remains of a possible male

(8005) aged 26–35 years, who was interred in a crouched position on his left side, with the head to the south. A small assemblage of 19 sherds (95g) of pottery was recovered from the backfill (8004). Grave 8024 (Fig. 26) was situated 3.5m west of grave 8006 and similarly contained a possible male (8023) aged 26–35 years. He lay in a flexed position and, like his neighbour, lay on his left side with the head to the south.

2.4.45 A small pit (6406) that was dug into infilled ditch 9180 contained a copy of an *as* of Claudius (SF 607), dated AD 41–54.

Phase 3c: Late Roman (c AD 250–400)

2.4.46 A small late Roman pottery assemblage suggests a low level of activity in this period. A late Roman group of pottery was recovered from pit 5557 in Area 4 (Fig. 13). The pit was a shallow feature, measuring 0.84m in diameter and only 0.07m deep, and the pottery included several sherds that indicate a date after *c* AD 240.

Other Roman features

2.4.47 Area 3 (Fig. 12) contained a ditch (3030) that could only be attributed broadly to the Roman period. The ditch was broadly aligned N-S but meandered in its course. It had moderately sloping sides and a concave base. Another cut to the west (3028) was interpreted as a recut. Three sherds of Roman pottery were recovered from ditch 3030. The geophysical survey indicated that the boundary was formerly more extensive and that ditches 9200 and 9201, which were uncovered in Watching Brief Area 1 to the north of Area 3, may have originally branched off it (Fig. 8). Both these ditches continued beyond the western edge of the site. The ditches were overlain by a colluvial layer (3001) related to the slightly higher ground to the west. A copper alloy Dolphin brooch of 1st century date (SF 301) was recovered from this layer.

2.4.48 Two ditches (5610 and 5637) that were partly exposed at the north-eastern corner of Area 4 (Fig. 13) were situated at right angles and may have formed the corner of a rectilinear enclosure that measured at least 7.5m E–W and 5.4m N–S. Both were quite small features, measuring 0.6m across and less than 0.2m deep.

2.5 Phase 4: Medieval (Fig. 9)

Area 1 (Fig. 10)

2.5.1 A medieval boundary extended across the southern part of the Roman enclosure. The earliest iteration was ditch 9128, which lay on an E–W alignment and was replaced by a pair of ditches (9124 and 9126/9127) that extended toward south-west. The pottery assemblage from ditch 9128 was dated to AD 120–150 but it is likely that the material is residual and that the ditch is associated with the medieval boundary. Pottery recovered from ditches 9124 and 9126/9127 dated to the mid 11th to mid 13th century. It is uncertain whether the latter ditches were in use at the same time or represent successive phases of the boundary. Ditch 1298, which was only partly exposed at the north-western corner of the excavation area but was 0.5m deep and at least 2.0m wide, produced only residual Roman material, including a *sestertius* of Trajan, dated AD 114–7 (SF 1299), but stratigraphically post-dated the enclosure and may have been contemporary with the medieval ditches to the south, perhaps defining

a parallel boundary for a field or other enclosure. Ditch 9109 branched off ditch 9127 and extended north-west across the excavation area, continuing beyond the edge of the site, perhaps to a junction with ditch 1298.

2.5.2 South of the boundary ditches was a small oven (1585) with was a tapered oval shape (Fig. 27). Several fragments of fired clay oven superstructure and oven furniture were recovered from the feature. The oven measured 1.54 x 0.91m and was 0.27m deep. None of the oven superstructure remained. Pottery from the fill dated to the mid 11th to mid 13th century.

2.5.3 A medieval strap-end and a probable medieval buckle were recovered from the modern subsoil in Area 1.

Area 2 (Fig. 11)

2.5.4 Part of a small enclosure (9131) revealed at the eastern edge of Area 2a contained pottery dated to 1050–1250. Only the south-western part of the enclosure was revealed by the excavated area. The enclosure ditch measured 0.83m wide and 0.28m deep. A stone spread at the edge of the site, immediately north of the enclosure, included a sherd of similar date.

Areas 4 and 5 (Figs 13 and 14)

2.5.5 Ditch 9149 extended E–W across the entire width of Area 4, cutting across the Roman enclosure complex (Fig. 13). It contained two sherds from a medieval cooking pot as well as some residual Roman material. It is possible that the ditch formed one side of a trackway, with ditch 9150 representing part of the southern side.

2.5.6 Medieval ridge-and-furrow cultivation was represented by furrows in the western part of the excavation, in Areas 4 and 5 (Figs 13 and 14). The furrows cut ditches 9149 and 9150.

2.6 Phase 5: Post-medieval

2.6.1 An elongated pit (7003) that measured 3.5 x 1.3m and 0.5m deep was located in Area 10a, and had a layer of limestone rubble across the base (Fig. 4). It contained an iron nail and a single small sherd of a mug or jug in Westerwald stoneware dated to 1580–1750.

3 FINDS

3.1 Later prehistoric and Roman pottery *by Kate Brady (with a contribution by Lisa Brown)*

Introduction

3.1.1 The excavation produced a large assemblage of late prehistoric and Roman pottery, comprising 10,681 sherds (84.2kg). This was fully recorded on an Access database using the Oxford Archaeology 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 was 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.

3.1.2 The pottery is in moderate condition. The mean sherd weight (MSW, 7.8g) indicates poorly preserved assemblage, and it would be tempting to suspect that this is skewed by the presence of the crumbly and fragmentary Malvernian wares, but this does not appear to be the case, as the MSW of all the material without the Malvernian fabrics is 9.4g, which is low. The surface condition of sherds was variable, ranging from good to heavily eroded in a few cases. Despite the softness of the fabric of Severn Valley Ware there were a large number of large sherds with well-preserved surfaces. The assemblage includes material that may date from the 2nd or 1st century BC onwards, but there are two main chronological foci in activity suggested by the pottery assemblage: in the middle to late Iron Age and middle Roman period.

3.1.3 The earliest pottery dates to the middle to late Iron Age and was collected from an enclosure ditch and roundhouse and a small number of associated features. The assemblage consisted of small amounts of various handmade fabrics with very few rims to identify forms. These were found alongside Malvernian wares in the form of large cauldrons, cooking pots and bowls which have a very wide lifespan, into the 2nd century AD, and were clearly in use on the site in the late prehistoric period.

3.1.4 The vast majority of the pottery (20.3% by weight) dated to the middle Roman period (Phase 3b) and was overwhelmingly sourced from the Severn Valley industry. A variety of fabrics was recorded with a significant proportion of earlier organic and limestone fabrics. All the major Severn Valley ware forms were represented and are typical of a rural assemblage in the hinterland of Gloucester. Malvernian wares continued to be used throughout the 2nd century, being found consistently alongside fabrics and forms of this date. Smaller contributions were made by other regional industries, including black-burnished ware from Dorset, but the requirements of the inhabitants of the settlement appear to have been largely met by fairly local sources. Similarly, imports were rare and restricted to a small amount of fineware fabrics from Central Gaul and the regional fineware industries of the Nene Valley and Oxford regions.

3.1.5 The latest Roman pottery in the assemblage comprises a small number of sherds of Oxford fineware products.

Fabrics and forms

3.1.6 The Iron Age and Roman fabrics are listed and quantified in Table 1 within the series of major Roman 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 Pottery 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. Prehistoric fabrics have been assigned site-specific fabric codes relating to primary inclusion type. For example, fabric S1 is sand tempered and fabric S2 is a different sand-tempered fabric. These are described in Table 1.

Table 1 Later Iron Age and Roman pottery fabric codes and descriptions

Ware code	Description	NRFRC code/reference	Sherd count	Weight (g)
Samian ware				
S20	South Gaulish samian ware (general).	incl **LGF SA**	8	35
S30	Central Gaulish samian ware (general)	incl **LEZ SA 2**	53	251
S40	East Gaulish samian ware (general)		4	7
Finewares				
F43	Central Gaulish 'Rhenish'	**CNG BS**	1	2
F51	Oxford colour-coated ware	**OXF RS**	5	23
F52	Nene Valley colour-coated ware	**LNV CC**	14	34
Amphorae				
A11	Dressel 20 Baetican amphorae (Peacock and Williams 1986, 140)	**BAT AM 1 and BAT AM 2**	17	931
A13	South Gaulish (Gauloise 4 etc)	**GAL AM 1**	8	160
Mortaria				
M22	Oxford white ware mortaria (Young 1977, 56).	**OXF WH**	4	57
M31	`Cirencester/SWWS'	**SOW WS**	1	20
M50	Oxidised (uncertain)		1	42
White wares				
W10	Fairly fine white fabrics (general)		5	27
W20	Coarse sandy white fabrics (general)		3	7
'Belgic type' wares				
E30	Medium to coarse sand-tempered 'Belgic type' fabrics		41	245
E40	Shell-tempered 'Belgic type' fabrics		8	6
E50	Limestone-tempered 'Belgic type' fabrics		9	41
E80	Grog-tempered 'Belgic type' fabrics	**SOB GT**	956	13,660
E810	Grog-and-sand-tempered 'Belgic type' fabrics		22	91
Oxidised 'coarse' wares				
O10	Fine oxidised coarse ware fabrics (general)		5	7
O20	Sandy oxidised coarse ware fabrics (general)		9	65
O40	Severn Valley ware (general)	**SVW OX 2**	3574	30,595
O41	Organic-tempered Severn Valley ware			

O80	Coarse tempered (usually grog) oxidised fabrics, equivalent to R90			
Reduced 'coarse' wares				
R10	Fine reduced 'coarse ware' fabrics (general)		13	32
R20	Sandy reduced coarse ware fabrics (general)		319	1770
R30	Medium/fine sandy reduced coarse ware fabrics (general)		219	1340
R35	North Wiltshire reduced coarse ware		2	24
R37	West Oxfordshire reduced coarse ware		10	197
R49	Reduced Severn Valley ware		689	6861
R50	Dark-surfaced reduced fabric		58	301
R70	Reduced fabrics with calcareous inclusions (general)		3	77
R90	Coarse-tempered (usually grog-tempered) reduced fabrics	cf Young 1977, 202 fabric 1	1	67
R95	Savernake ware	**SAV GT**	43	1726
Black-burnished wares				
B11	Dorset BB1	**DOR BB 1**	895	4420
B30	Black-burnished imitation fabric		9	75
Calcareous wares etc				
C10	Shell-tempered fabrics (general)		2	7
Malvern fabrics				
G20	Malvern fabrics (general)		47	99
G21	Malvern igneous rock fabric	**MAL RE A**	24	261
G25	Malvern limestone fabric	Peacock 1968, fabric B1	1335	6049
Other handmade fabrics (middle to late Iron Age fabrics)				
C1	Fine smooth clay slightly micaceous with abundant small calcite <2mm		4	18
G1	Smooth fine slightly micaceous clay with brown grog and rare calc (?shell)		2	13
G2	Soapy smooth fine grog, poss some calc (shell?)		2	4
I1	Very smooth fine clay, slightly micaceous with common red powdery oxides		3	5
L1	Slightly sandy, slightly micaceous somewhat soapy, containing moderate to abundant finely crushed/eroded white limestone fragments mostly, 2mm (Malvernian)		15	34
QU1	Red margins, black core, smooth. Very fine smooth clay with sparse rounded translucent quartz inclusions		3	22
QU2	Very fine sandy sparse black oxides (not glauconite)		1	3
S1	Lightly sanded slightly micaceous with sparse inclusions of finely crushed platey and fossil shell, some crinoids some black oxides		47	166
S2	Lightly sanded with common small detrital fossil, some red oxides		22	38
S3	Smooth fine clay slightly micaceous with sparse to moderate fossil platey shell <3mm smoothed surface		3	16
V1	Soapy clay with common red and black oxides, small squarish vesicles <3mm		82	214

3.1.7 The largely pre-Roman handmade assemblage was dominated by Malvernian fabrics G20 and G25. The fabrics and forms have a particularly long life-span and were in production from the 2nd century BC in the handmade Iron Age tradition. They are largely coarse utilitarian vessels and include large jars, bowls and cauldron-type

vessels. It appears that these vessels were manufactured and used alongside 'Romanised' forms well into the 2nd century AD (Timby 2000).

3.1.8 The Malvernian component of the assemblage makes up 13.5% by sherd count and 4.2% by EVE and includes characteristic middle to late Iron Age forms such as bead rim jars and bowls and large cauldron-like vessels with bead rims and flat reeded rims.

3.1.9 In many cases in this assemblage sherds in this fabric have been found alongside other middle to late Iron Age fabrics, with late Iron Age to early Roman E-wares or with post-conquest 'Romanised' wares, allowing their date to be narrowed down somewhat. Features have been phased as late prehistoric when there is an absence of Romanised wares in the feature, but it is certainly possible that features with only a small amount of Malvernian ware are early or even middle Roman in date.

3.1.10 The limestone-tempered wares and E-wares were supplemented in the middle to late Iron Age assemblage by sherds in fabrics tempered predominantly with sand (S1, S2, S3), limestone (L1) and less commonly calcite (C1), grog (G1, G2) and quartz (Q1, Q2). There were also sherds in smooth fabrics with little visible temper (I1, V1).

Roman coarsewares

3.1.11 In the Roman period, the dominant oxidised and reduced coarsewares were from the Severn Valley industry (O40, O41 and R49) with material from the kilns contributing 54% of the overall assemblage by sherd count and 60% by weight. The Severn Valley industry produced coarsewares at several sites in the valley throughout the Roman period, possibly beginning just before the conquest (Timby 1990). The Severn Valley wares are all recorded under three codes but there was variation in the individual fabrics with varying colour and inclusions. In general, the O40 material is a soft sandy orange fabric often with a grey core and powdery surfaces. Inclusions are mainly fairly fine sand, but also variously included occasional fine charcoal, mica and limestone flecks. Fabric O41 is generally a coarser variant, with common organic (or leached out voids), charcoal and limestone inclusions. These latter fabrics are thought to be from kilns in production in the earlier part of the Roman period (AD 40 to *c* 150; Timby 2017, 313). This coarse organic-tempered fabric occurred in both oxidised and reduced fabrics but was only differentiated in the oxidised version as the OA system does not include a code for the reduced variant at the time of recording.

3.1.12 The Severn Valley ware forms recovered from the site included the full range of produced by the industry, with jars, bowls, dishes, flagons, beakers and tankards all present. All forms were present in both oxidised and reduced variants and in the earlier fabrics with organic and limestone inclusions and the longer-lived finer sandy fabric.

3.1.13 Many of the forms are made throughout the Roman period and are difficult to date, but some variations in these forms reflect broad chronological trends. Some forms were manufactured throughout the Roman period, such as the everted-rim narrow- and medium-mouthed necked jars, of which at least 20 vessels are present in the assemblage. There is variation within the group, which includes vessels with cordons at the base of the neck and one with a splayed flat rim, thickening towards the end

(Fig. 28, no. 7). Another two have slightly hooked rims. Other notable vessels include one with a slightly squared rim.

3.1.14 Wide-mouthed jars and wide-mouthed jars/bowls in Severn Valley ware fabrics were also manufactured throughout the Roman period and are well represented, with 25 examples. The most commonly occurring rim forms were everted and slightly hooked or squared. Two wide-mouthed jar/bowls (Fig. 28, nos 6 and 28) are cordoned, a type paralleled in the assemblage from Haymes, Southam (Rawes 1982, fig. 4, no. 72).

3.1.15 Seven vessels were recorded as storage jars (CN). All had everted rims of various forms, with some slightly hooked. Two were high-shouldered forms. Two of the forms were paralleled at sites in Gloucester (Rawes 1982).

3.1.16 Tankards were common, numbering 57 vessels (6.78 EVEs). Although these were made throughout the Roman period, the forms are good chronological indicators with the profile becoming progressively more flared over time. Handles were common (Fig. 28, nos 4, 15 and 18), with some attached to vessel walls and some broken off. The bases, where present, are most commonly of a pointed foot-ring type (four vessels) and in one case flat. They were commonly cordoned, and rims were either beaded or plain and upright or slightly bent and defined by an exterior groove just under the rim. Two vessels were decorated with a burnished lattice (Fig. 28, nos 4 and 16). When only a rim and little of the body is present it is impossible to distinguish between tankards and carinated bowls/beakers and in this assemblage rims of this kind have been recorded as tankards. This may have increased the tankard count. More clearly identifiable carinated bowls (which date to the mid 1st to 2nd century) were identified where a larger portion of the vessel wall was present and these numbered four vessels identified by rim, but there were also body sherds that were clearly from carinated bowls but have not been included in the count. Despite their definition as bowls, the diameters, ranging from 15cm to 19cm, were within the range of the tankard diameters (11cm to 20cm) and were comparable with the larger of those. It is possible that they were similarly used.

3.1.17 The Severn Valley ware assemblage included five flat-rimmed bowls with an internal lip (of which two were handles: Fig. 28, nos 23 and 26), a design that may have functioned to prevent spillage of the contents when carrying. Other bowl forms in the fabric included everted-rim cordoned bowls and a globular bowl with an upright rim. Wide-mouthed forms were most common, as is typical in the region, and in some cases it was impossible to tell if a small rim sherd was from a wide-mouthed jar or bowl, hence the large number of vessels assigned the code 'D' (indeterminate jar/bowl). Less common types recovered from the site included flagons, of which there were five examples, all in oxidised Severn Valley ware fabrics O40 and O41. One was a small ring-necked flagon paralleled in Rawes (1982, fig. 1, 1) and dates to the mid 2nd century. One, dating to the 2nd century, was paralleled at Portway, Gloucester (Rawes 1982, fig. 2, 8) where it was described as a jug (Fig. 28, no. 5). There were two dishes in the Severn Valley ware assemblage, both with plain rims and curving sides similar to vessels from Gloucester (Webster 1976, fig. 10, 70/73; Rawes 1982, fig. 5100-102). There were three examples of lids in the assemblage, one with a moulded form (Fig. 28, no. 30), and one colander or cheese press (Fig. 28, no. 31).

3.1.18 Other oxidised fabrics (O10, O20) were much less common and made up only 0.14% of the assemblage by sherd count and 0% by EVE (as there were no rims). Their origins are not known, but they may represent a small contribution from other regional coarse ware industries such as those in Oxfordshire or north Wiltshire.

3.1.19 The remaining coarseware fabrics were almost all reduced. Fabrics R10, R20, R30, R31, R35 and R37 constituted 6% of the assemblage by sherd count and 8.3% by EVE. These general fabric codes have been used because the rather undiagnostic character of these fabrics means that attribution to a source cannot be certain; material from other (unknown) local sources using similar clays in the same tradition would not be distinguishable macroscopically. Forms in these other reduced wares included a globular jar/beaker in fabric R30 with accompanying heavily rusticated body sherds from ditch group 9168 (Fig. 28, no. 13). A bowl with flat rim and internal lip in micaceous fabric R30 is probably a copy of a Severn Valley ware form. There are also three flat rim bowls in greyware fabrics R20, R30 and R37 (Fig. 28, no. 22) which are all copies of black-burnished ware forms. A lid-seated jar in fabric R30 is similar to one from the non-kiln assemblage at Longford (Booth forthcoming). It was dark surfaced, and round bodied with a pronounced in-sloping rim (Fig. 28, no. 11).

3.1.20 A small quantity (43 sherds) of Savernake ware and probable Savernake-type ware (R95 and R90) makes up 0.5% of the assemblage by sherd count and 0.6% by EVE. The presence of Savernake ware, probably at the northern limit of its distribution, reflects an alternative source for coarse-tempered storage vessels in the earlier Roman period aside from the Malvernian kilns. Only three sherds from oxidised coarseware large storage jars (O80) were found. Two coarseware mortaria fabrics are present. One is Oxford white ware (M22), and the other is in an oxidised fabric (M50) of unknown source. This was residual in the topsoil.

3.1.21 Other coarseware sherds include whitewares (8 sherds) of varying fineness (W10, W20). Only one rim is present, from a jar or bowl. The source for these is not certain but they may have come from the Oxford kilns.

3.1.22 Black-burnished ware forms a significant component of the assemblage (895 sherds) which represents 9.3% of the assemblage by sherd count and 10.6% by EVE. Fifty-four vessels are represented by rims and these include everted rim cooking pots, smaller cooking pot type beakers, bowls and dishes. The cooking pots (CK) number 31 vessels and the majority of these have fairly upright or only slightly out-sloping rims. The angle of cooking pot rims can be loosely chronological, with rims becoming more splayed throughout the Roman period. This group appears to be typologically early on the whole, although one rim from Area 1 is moderately splayed and probably dates from the later 2nd century AD onwards. Decoration includes lattice decoration at an acute angle, suggesting a date for these vessels before AD 200. One vessel has wavy line decoration under the rim, which is rare after AD 150 and absent after AD 200 (Gillam 1976, 63). There are four rim sherds of miniature cooking pots/beakers (EH) which are unlikely to date to after the 2nd century. One of these has a burnished lattice decoration and one is decorated with burnished diagonal lines (Fig. 28, no. 14). Fifteen flat-rimmed bowls in black-burnished ware were recovered. These date from AD 150–

250 but are all without rim grooves, which suggests a date for this group in the latter half of the 2nd century.

Finewares and imports

3.1.23 Finewares constitute 0.9% of the assemblage by sherd count and 2.2% by EVE, and consist largely of samian wares (S20, S30, S40). There are only nine sherds of finewares from regional sources, including two of Oxford colour-coated ware (F51 and M41). The Oxford mortarium is a bead and flange type dating to AD 300–400 and was recovered from the topsoil. There are also 14 sherds of Nene Valley ware (F52). A single rim represents a bowl, similar to one found at Durobrivae (Perrin 1999, fig. 65, 107; illus 292). The imported fineware assemblage consisted of 58 fragments of Central Gaulish samian ware (S30), four of South Gaulish (S20), and four of East Gaulish (S40). There is a single body sherd of Central Gaulish 'Rhenish' ware (F43).

3.1.24 Only two sherds of the South Gaulish samian (which were imported from AD 40–110) were in early Roman (Phase 3a) contexts; the other six were abraded and clearly residual in Phase 3b deposits. These six sherds were from a Drag 27R cup, and were recovered from enclosure ditch 9153 in Area 5, close to the remains of a possible building and settlement area.

3.1.25 The Central Gaulish samian assemblage includes four cups. Three are from Area 5, in the vicinity of building 5617, of probable industrial function, and an enclosure. There are two Curle 23 cups of 2nd century date, one of which was recovered from a rubbish pit to the north. Sherds from a Drag 27b cup dating to AD 120–160 were recovered from ditch 9151, just to the south of the building. All are likely to have derived from settlement nearby. There are seven dishes or platters, of which three rim sherds are too small to be certain of the form. There is a possible rim fragment of a 31/31R dish from the fill of a natural hollow in Area 5, close to features associated with settlement. One rim from a probable cup was recovered from grave 2111 in Area 2. This is unlikely to represent deliberate deposition as it is only a very small sherd weighing 1g.

3.1.26 A large enclosure ditch in Area 1 (9103) contained a Drag 18/31R dish fragment dating to AD 120–150, and a Drag 18/31 or 18/31R dish fragment was also recovered from ditch 9188 in Area 6. A ditch (9143) to the east of the rectangular enclosure in Area 2 and close to several burials produced 13 sherds of a Drag 18 or 18R plate which had been drilled with two holes in the upper part of the body, probably for suspension. Decoration on this vessel enabled closer dating to between AD 145 and 170. Rim fragments of three Central Gaulish samian bowls were recovered. Two, from clearly different vessels, were recovered from pit 5579, to the east of building 5617, but there is too little of either remaining to be certain of the detailed type. A Drag 30 bowl sherd with ovolo decoration and a rivet repair was recovered from ditch 9180 in Area 6 (Fig. 28, no. 20). The single small sherd of Central Gaulish 'Rhenish' colour-coated ware was recovered from medieval ditch 9127 in Area 1 and represents the only other imported fineware.

3.1.27 Twenty-six sherds of amphorae were recovered from the site. All are body sherds apart from one, which is a handle. The fragments are mostly from South Spanish olive oil

amphorae (A11; 17 sherds, 931g), with a lesser amount from Gaulish wine amphorae (A13; 9 sherds, 182g).

Table 2: Quantification of pottery by form

Form	Description	MV	EVE
B Flagons			
B	**Indeterminate flagon**	2	0.2
BA	**Small flagon (up to 60mm rim diameter)**	1	0.1
BB	**Larger flagon**	2	0.2
C Jars			
C	**Indeterminate jar**	29	3.72
CB	**Barrel-shaped jar**	2	0.12
CC	**Narrow-necked jar/flask**	21	5.98
CC/CD	**Narrow-necked jar/flask/Medium-mouthed jar**	1	0.75
CD	**Medium-mouthed jar, often necked**	11	3.24
CE	**Squat, high-shouldered or necked jar**	3	0.71
CG	**Globular jar**	2	0.7
CH	**Bead-rimmed jar**	1	0.12
CJ	**Lid-seated jar**	2	0.45
CK	**'Cooking-pot'-type jar with everted rim (eg black-burnished ware jar)**	33	3.15
CM	**Wide-mouthed jar**	27	3.83
CN	**Storage jar**	12	1.49
D Jars or bowls			
D	**Jar or bowl**	69	4.28
E Beakers			
E	**Indeterminate beaker**	2	0.2
EC	**Bag-shaped beaker**	2	0.14
ED	**Globular/bulbous beaker**	2	0.63
EH	**'Jar' beaker (ie small example of everted rim jars)**	3	0.51
F Cups			
F	**Indeterminate cup**	2	0.06
FA	**Hemispherical cup**	1	0.07
FB	**Campanulate cup (eg Drag. 27)**	2	0.17
H Tankards			
G	**Tankards**	57	6.78
H Bowls			
H	**Indeterminate bowl**	20	1.14
HA	**Carinated bowl**	4 (15 incl. body sherd id)	0.54
HB	**Straight-sided bowl with dropped flange**	23	2.06
HC	**Curving-sided bowl**	36	4.16
I Bowls or dishes			
I	**Indeterminate bowl or dish**	12	0.48
IB	**Curving-sided bowl or dish**	1	0.07

J Dishes and platters			
J	**Bead-rimmed dish**	3	0.33
JB	**Curving-sided dish**	3	0.14
JC	**Platter**	1	0.05
K Mortaria			
KA	**Hook-rimmed/bead-and-flanged mortarium**	2	0.1
L Lids			
L	**Lids**	6	0.94
Total		427	47.95

Table 3: Quantification of pottery by form and phase

Type	Phase 2	Phase 3a	Phase 3b	Phase 3c	Total
Flagons		1	4		5
Jars	2	8	109		119
Jars/bowls		15	54	1	70
Beakers			8		8
Cups			5		5
Tankards		7	48		55
Bowls		9	61	1	71
Dishes			13		13
Platters		1	6		7
Lids		1	5		6
Total	2	42	313	2	359

Context and chronology

Phase 2: Middle to late Iron Age

3.1.28 Pottery from features assigned to Phase 2 comprised 8% of the total assemblage by sherd count and 1.3% by EVE, a discrepancy explained by the fragmentary nature of the assemblage, with soft crumbly handmade and poorly fired fabrics and very few rims. The assemblage numbers 855 sherds (3862g) with a MSW of only 4.5g. The group mainly comprises Malvernian limestone-tempered fabrics, which were predominant in the region from the middle Iron Age onwards. Other handmade Iron Age-type fabrics and a small amount of late Iron Age E-ware material makes up the remainder of the group.

3.1.29 Four rims were present in the handmade later prehistoric fabrics (excluding the Malvernian and E wares), including a small bowl with an upright flat rim in fabric V1 and another similar small bowl rim in the same fabric that may have come from the same vessel. There was a small rim with an internal bevel in the same fabric, and a small everted rim from a probable bowl in fabric S1. There was one stubby everted rim

from a Malvernian ware (G25) bowl and one very small rim fragment from a vessel in fabric E80.

3.1.30 Pottery from this phase was concentrated in Area 1, demonstrating a clear focus of settlement activity in the north-eastern part of the site. The assemblage was recovered from an enclosure ditch, a roundhouse ditch and associated features including postholes. Only four rims were recorded, all from bowls, two of which have upright, flat-topped rims. One body sherd, which probably dates to the later Iron Age, had a shallow tooled double line inverse cordon decoration. The E-wares and the Malvernian limestone-tempered wares were manufactured into the Roman period, with the E-wares spanning the period *c* 100 BC to AD 100 and the Malvernian wares from *c* 200 BC to AD 200. However, in this phase this material was accompanied almost solely by other late prehistoric fabrics dated to the middle to late Iron Age, whereas in subsequent phases they were accompanied by Romanised material. A small amount of Romanised material (Severn Valley ware) recovered from a very small number of features (such as ditches 9115 and 9116) represents the final infilling of these features probably soon after the establishment of the industry, which is currently understood to have developed in the mid 1st century AD, possibly just prior to the Roman conquest (Timby 1990).

Phase 3a: Early Roman

3.1.31 Pottery from features assigned to Phase 3a comprised 20% of the total assemblage by sherd count and 10% by EVE. There was only a small number of different fabrics, consisting mainly of E-wares (E30, E40 E50, E60, E80, E810) and limestone-tempered Malvernian wares (G25). A not insignificant contribution was made by early Severn Valley wares (O41, O40 and R49) and other coarsewares (R20, R30, R31, R35, R37), along with two sherds of South Gaulish samian ware (S20) that date the assemblage to the latter half of the 1st century AD.

3.1.32 The vast majority of the material from Phase 3a is in sand-, grog-, limestone- and shell-tempered E-ware fabrics (E30, E40, E50, E80, E810), which comprise 62% of the phased group by sherd count and 81.6% by weight. This is in comparison with the next most common fabric type in this phase, the limestone-tempered Malvernian wares (G25), which contributed 15.1% by sherd count and 3.9% by weight. Ten E-ware vessels were represented by rims; these were all handmade and included a curving sided bowl and a medium-mouthed jar in grog-tempered fabric E80, and a cooking pot in sand-and-grog fabric E810 (Fig. 28, no. 1). A very large but very fragmentary vessel (SF 502; 471 sherds, 11,964g) was recovered from ditch 5180 in Area 5. It was a coarse, handmade thick-walled cauldron-type cooking pot, and patches of burning and sooting on the exterior attest to its use in a fire. A single grog-tempered vessel was wheel-made and of the 'Belgic' type more commonly found in the south-east of England. There was no rim, but three sherds made up part of the body and the pedestal base of a vessel of this type deposited in enclosure ditch 9100 in Area 1.

3.1.33 The Severn Valley ware component of this early Roman phased group included an upright tankard with two cordons on the upper body and a bead rim (Fig. 28, no. 3) dating to AD 40–100 (Webster 1976, fig. 7, 137). Another upright-handled cordoned

tankard had cross-hatch decoration (which appears on vessels by the end of the 1st century) and an almost complete profile (Fig. 28, no. 4). There was also a large tankard (Fig. 28, no. 16) with a similar decoration which does not appear to have been handled, and it is possible that two such vessels functioned as part of a set. The phase group included a small number of wide-mouthed jars/bowls. One, in fabric O40 from feature 9191, had a girth cordon and everted rim and was probably late 1st century in date. Another, from ditch 9182, in fabric O41 had a distinctly squared rim. A cordoned beaker or small narrow-mouthed jar in fabric R49 was similar to examples from Vineyards Farm, Charlton Kings (Rawes 1982, fig. 5,77/87), where they were dated to the latter half of the 1st century.

3.1.34 Two sherds of South Gaulish samian ware (S20) were recovered from the phased group. Both were tiny rim sherds from unidentifiable vessels, but the import date range for this fabric is AD 40–100.

Phase 3b: Middle Roman

3.1.35 Pottery from features phased to the middle Roman period constitutes 60.4% of the assemblage by sherd count and 75.5% by EVE. The phase group included rims of 313 vessels (35.88 EVEs) and the group included flagons/jugs (B), narrow- (CC), medium- (CD) and wide-mouthed jars (CM), nine cooking pots (CK), three storage jars (CN), two carinated beakers (EC), tankards (G), bowls (H), a curving-sided platter (JC) and a lid (L).

3.1.36 The middle Roman assemblage is characterised by the presence of a wide range of vessels in Severn Valley ware, which are likely to have come from kilns around Gloucester. The assemblage includes a range of chronological indicators consistent with a middle Roman date.

3.1.37 A fine, thin-walled globular jar/bowl with upright rim and cordoned body (context 5043, ditch 9169) is suggested by Rawes (1982, fig. 2, 72) to be fairly early in the range and probably 2nd century in date. Wide-mouthed jars/bowls, largely in fabrics O40 and O41 (and with one vessel in R49), were common (numbering at least 21 vessels), with rims that are either squared or slightly hooked. Hooked rims appear in the Severn Valley repertoire in the 2nd century, becoming progressively more hooked through time. The sharply hooked forms of the late Roman period are not present in this assemblage. One wide-mouthed bowl had a lid-seated/reeded rim (similar to Webster 1976, fig. 9, 57) that is probably of late 2nd or early 3rd century date. Another with a moulded rim and a single groove on the upper part of the body (similar to Webster 1976, fig. 4, 75) is probably similarly dated.

3.1.38 Other Severn Valley forms that appear in the 2nd century are flat-rimmed/flanged bowls with an internal lip. These were present in fabrics O40, O41 and R49 in the Phase 3b assemblage. The form is a late 1st to 2nd century one, and those in the group in fabric O41 and the organic-tempered R49 probably date no later than the mid 2nd century. One of these bowls (Fig. 28, no. 23) is double handled, with a cordoned upper body. It is also burnt under and around the rim. One vessel in fabric R49 (Fig. 28, no. 26) has a single remaining handle but there would originally have been two. This vessel was well used, with evidence of repair and use marks on the interior (see below).

3.1.39 The tankard forms were also consistent with an early to middle Roman date and those from middle Roman phased groups included mostly upright forms, some of which had cordons. Some also had handles present. A small number were slightly flared (Fig. 28, no. 18) but none had the widely flared form characteristic of the later Roman types. All the identifiable forms date to the late 1st to 2nd century, but in the middle Roman assemblage were in contexts of 2nd century date. Only one in the phase group was slightly more splayed (context 5223, ditch 9168) and this vessel could have a late 2nd to 3rd century date. The carinated bowls/beakers were in fabrics O40 and O41 and date to the 2nd century in the middle Roman contexts.

3.1.40 There was one curving-sided platter in fabric R49 (Fig. 28, no. 29) in the phase group (context 1415, enclosure ditch 9103) and the whole profile survived. It was from a context dating to the first half of the 2nd century. There were three further probable dishes/platters in fabric O40, all recovered from contexts in Area 6 (pits 6187/6292 and 6076) and these also date to the 2nd century. A single globular/bulbous beaker (Fig. 28, no. 12) in fabric R49 is present in this phased group from context 5133 (ditch 9168) and a similarly shaped vessel in fabric R30 from the same ditch was rusticated (Fig. 28, no. 13). A similar form in the Oxford repertoire (Young 1977) can date up to the mid 2nd century and a similar date is likely for these vessels. A single vessel with a perforated base/lower body, probably a colander (Fig. 28, no. 31), was recovered from context 5133, ditch 9168 and these are also most common in 2nd century AD assemblages.

3.1.41 The Phase 3b group is also characterised by the appearance of black-burnished ware. The vessels would have been widely available in the region by around AD 120, distributed from the Dorset kilns via the Fosse Way. The site assemblage includes flat-rimmed bowls of mid 2nd to mid 3rd century date, three of which were recovered from a single pit (5343) in Area 5. Another, from pit 5550, has a burnished lattice decoration. There were also cooking pots with middle Roman forms and decoration including some with acute burnished lattice decoration (dating these vessels to up to the end of the 2nd century) and wavy line decoration on the neck (rare after AD 150 and absent after AD 200). The cooking pots all had fairly upright or slightly splayed rims, also consistent with a middle Roman date. There were four miniature cooking pots/beakers in the group (Fig. 28, no. 14), all recovered from pits in Area 5. This is a 2nd century form (Gillam 1976).

3.1.42 A flat-rimmed bowl in fabric R37 (probably from the west Oxfordshire kilns) was an imitation of a black-burnished ware form and is similarly dated to those in black-burnished ware (AD 150–250) (Fig. 28, no. 18). A straight-sided bowl/dish with a bead rim in sandy greyware (R20) was another black-burnished ware imitation. A curving-sided flanged bowl with a rippled rim (Fig. 28, no. 27) from context 5342 (ditch 9164) was reminiscent of a Verulamium form but was in a medium sandy greyware, and was probably a fairly local product, dating here to the first half of the 2nd century. A vessel possibly used as a lid (although perhaps not exclusively so) in fabric R49, from context 6293 (pit 6187/6292), was very similar to one from Portway, Gloucester (Rawes 1982, fig. 5,105) and probably dates to the early part of the 2nd century (Fig. 28, no. 30).

3.1.43 The Central Gaulish samian ware assemblage from Phase 3b contexts includes five cups, two Curle 23 form, a Drag. 27(B) and the tiny rim of one possible cup, all in a Central Gaulish fabric (S30) and dating to the 2nd century (AD 120–200). There was also one cup (Drag. 27R) in fabric S20 which was of 1st century AD date, and residual or curated in this phase group. Four of these were from Area 2 (grave 2111, ditches 9151, 9153 and 9168) and one was from a pit (5571) in Area 5. The Drag. 27(B) cup was more closely dateable (AD 120–160). Decoration on a sherd with drilled holes in the body from context 2125 (group 2143) was characteristic of a workshop of Cinnamus or Paternus, working in Lezoux (Webster 1996, 84) and is likely to have been manufactured in the middle of the 2nd century (AD 145–150) and imported soon after this. The single sherd of Central Gaulish 'Rhenish' ware from ditch 9127 arrived after AD 150.

3.1.44 There were at least five sherds of large chunky flat-rimmed vessels in the phase group, which are comparable with ones found at Frocester in the pre-Roman group, where they are described as large hammer-head rim bowls (Timby 2000, fig. 9.2, illus. 58–60). It is possible that these are residual in this group; all came from ditches that were cutting Phase 2 or Phase 3a features, although as production of Malvernian ware is known to have continued into the 2nd century AD they may be associated with the middle Roman activity.

Phase 3c: Late Roman

3.1.45 Only one group dated to the late Roman period. The assemblage, from pit 5557, was dated by body sherds from a flanged bowl in black-burnished ware with traces of arc decoration dating to after the middle of the 3rd century. The group also contained a Severn Valley ware jar with a hooked rim, suggesting a late date, and five body sherds of Oxford colour-coated ware (F51) from an unidentified vessel with a pedestal base, dating to after AD 240.

3.1.46 The rim of an Oxford colour-coated mortaria (M41) from the topsoil was of Young type C100, the bead and flange form dating to the 4th century. No other pottery of certain late Roman date was recovered.

Pottery condition and pattern of deposition

3.1.47 The overall MSW (weight divided by the number of sherds), which records average fragment size and is therefore a useful proxy for condition, was 7.9g. It was slightly lower in Phase 2 (4.5g) and consistent across the remaining phase groups. These low MSWs indicated a poorly preserved assemblage. This suggests that the material may have been discarded/middened elsewhere, and moved prior to final deposition. The assemblage was recovered from a range of feature types. The majority of the assemblage (76% by sherd count) was from ditches. Sixteen per cent was recovered from pits, 3% from layers (spreads and topsoil/subsoil) and 1.1% from other features which represent two whole pot deposits. A further 0.96% was from tree-throw holes or natural features, 0.89% was recovered from burials and 0.87% from postholes. The pattern of pottery deposition and condition suggests that, while deposition was concentrated in ditches, there was no significant difference in the condition of the

pottery across most feature types, suggesting that most of the pottery was subject to a similar process of waste management (eg being incorporated into middens before being deposited into cut features) after household breakage and initial discard.

Evidence for pottery use

3.1.48 There are three main types of use visible on a small number of sherds. Evidence of a vessel being used for cooking or heating water was the most common, with limescale, sooting or burning visible on sherds from 13 contexts. The limescale deposits were present on the interior of two Severn Valley ware wide-mouthed jars/bowls from Area 6. Sooting was noted on vessels from Areas 1 and 5 and varied from sooting around the rim on a small jar/bowl, a handled flat-rimmed bowl (both Severn Valley ware), and a lid-seated jar in fabric R20 that was sooted around the underside of the rim and was probably used as a cooking pot. A straight-sided dish in fabric R37 was sooted over the whole of the exterior.

3.1.49 Modification is evident on five vessels; a Drag. 18 dish from ditch 9143 in Area 2 has two post-firing holes drilled in its upper body, possibly for suspension. A Savernake ware sherd from grave 2111 (Area 2) has a neatly drilled post-firing hole in the body, and the same was observed on a Severn Valley ware sherd from ditch 5180 in Area 5. A Severn Valley ware flat base from pit 6410 has a post-firing hole in the centre. A sherd from the base of a black-burnished ware vessel had been deliberately trimmed to a circular shape *c* 30mm in diameter, perhaps for use as a counter, and was found in the fill of grave 2111.

3.1.50 Repair is visible on sherds from three vessels. Two vessels from Area 5 have rivet repairs on the body. One is a Severn Valley ware body sherd from ditch 9149 and one is a handled bowl in reduced Severn Valley ware with a double rivet repair along the same break (Fig. 28, no. 26). This was recovered from ditch 9152. A samian ware Drag. 1/31 R? body sherd has a rivet repair and this was recovered from ditch 9103 in Area 1. Another samian ware bowl from ditch 9180 also has a rivet repair (Fig. 28, no. 20).

Discussion of key groups

3.1.51 Two main areas of the site may represent settlement foci. In Area 1 an enclosure and roundhouse and associated features produced the majority of the pottery assigned to Phase 2. The small number of rims and the wide date range of the fabrics meant few vessel forms could be identified and the settlement cannot be dated by pottery alone. All of the material was available throughout the middle to late Iron Age period, with late Iron Age to early Roman grog-tempered wares and a small amount of Romanised material recovered from some features, suggesting that the final infilling of enclosure features took place in the latter half of the 1st century AD.

3.1.52 The material recovered from features assigned to Phase 3a suggests that the beginning of the Roman period of activity on the site was also in the latter half of the first century AD. There were several 1st century AD tankards, and significant E-ware and Malvernian ware components to the phased assemblage. There are no forms that are clearly pre-Flavian, suggesting that this development could have taken place in the late 1st century AD. Forms including bowls, tankards, jars and beakers suggest settlement

activity nearby, although the fragmentary nature of the group, with a low MSW of 8g, suggests that the pottery may have been redeposited before its final place of deposition.

3.1.53 The Phase 3b group included a large number of forms dating the group to the 2nd century. The presence of black-burnished ware and Central Gaulish samian ware suggests that activity began after AD 120. Most of the forms sit comfortably within the middle Roman period, and none need date later than the end of the 2nd century AD. Forms suggest settlement foci in Area 1, where the early enclosure was remodelled, with vessels in a wider range of fabrics than previously, in forms including jars and cooking pots, tankards, bowls and platters. Fine samian and other table wares were used and amphora sherds suggest olive oil was consumed. In Area 4, settlement may be related to a post-built structure (5617) and features associated with it including an oven and rubbish pits and nearby enclosure ditches contained a similar range of fabrics to Area 1 but there was also a high proportion of bowls and jar/bowls and tankards. Again, there were fine wares used in the settlement area, with cups, bowls and dishes represented and a few sherds from olive oil amphorae.

3.1.54 The Phase 3b assemblage from Area 2 includes a small amount of material from burials but this is likely to have been accidentally incorporated. None of the material is indicative of grave goods. A samian dish recovered from ditch 9143 had drilled holes that may have been used for suspension and its presence, alongside a samian cup and decorated samian sherd from the same ditch, suggests special activity in the vicinity that required the use of fine dining vessels. Feasting or ritual activity is tentatively suggested. Two buried pots in the area could only be broadly dated to the Roman period as the rims were not present. Their burial, with no associated human remains or other material but close to an area utilised for inhumation and cremation burial, may represent structured deposition either contemporary with the burial activity or in the subsequent late Roman phase. However, the overall lack of activity in Phase 3c suggests that the burial of these pots also took place in Phase 3b.

3.1.55 Only one pit is certain to have received later material, representing a significantly lower level of activity in Phase 3c, by which point the site was almost certainly peripheral to any settlement.

Settlement status and local and regional context

3.1.56 The pottery assemblage suggests that the site formed part of a low-status rural settlement and sits well into the pattern for the region with a standard set of forms and fabrics, dominated by products of the Severn Valley industry and few exotic products. Jars were dominant, accounting for 49.2% of the assemblage by EVE, supplemented by bowls, which were 16.6% by EVE. Indeterminate jars/bowls accounted for 9.7%. A significant portion of the assemblage was made up of tankards (14.3%). This was in contrast to the assemblage from Frocester, where jars were the most common (51%), and tankards the second most common (33%), followed by bowls (11%). The assemblage at Frocester spanned the Roman period and so this difference may be explained chronologically. Severn Valley wares as a whole form a greater portion of the site assemblage than they did at Frocester, where they

accounted for only 22% (by weight) of the quantified assemblage, whereas at Farm Lane they account for over half the assemblage (54%). Timby (2000) suggests in the Frocester report that there (and at Cirencester) a greater proportion of the pottery came from the Wiltshire Industry than was the case for Gloucester, where Severn Valley products are more common. This is reflected in the Farm Lane assemblage and other sites in the hinterland of Gloucester, such as Cowley (Mudd *et al*. 1999) and Great Witcombe villa (Leach 1998), and at Hucclecote Link Road (Timby 2003), where Severn Valley wares accounted for 70% by weight.

3.1.57 This observation is also evidenced in two large assemblages recently excavated to the north of Gloucester, at Longford and Innsworth. The excavation at Longford (Booth forthcoming) revealed evidence of pottery production of late 1st to early 2nd century date in the form of kilns and an associated pottery assemblage comparable to the early Roman fabrics from Gloucester. None of this kiln material (or material from the Gloucester kilns) is present in the Farm Lane assemblage. Longford also produced a large non-kiln assemblage, and this was more comparable with the Farm Lane assemblage in terms of the dominance of Severn Valley ware (42% by weight). There is a marked difference in the percentages of vessel forms, with a much greater proportion of jars (68%) and significantly fewer bowls (7.3%) and tankards (6.9%), highlighting the significant contribution tankards make to the Farm Lane assemblage. Fieldwork at Innsworth is ongoing, but in the assemblage from the first phase of excavation it has been noted that Severn Valley wares dominate. However, in contrast to Farm Lane, as at Longford, the assemblage includes a significant late Roman component, with a greater variety of forms (OA 2019b).

3.1.58 The site assemblage was comparable to recently excavated assemblages recovered from evaluation trenching in the immediate area which include a mostly early Roman assemblage from the proposed Cheltenham Secondary School (OA 2019a), which may represent the same wider settlement as that at Farm Lane. An assemblage recovered from the evaluation stage of the investigation (CA 2006) was very similar in composition in terms of forms and fabrics and was similarly dated to the 1st to 3rd century. Most notably, there were also a further two buried Severn Valley ware vessels with no cremated remains inside. The pottery assemblage from Brizen Farm (OA 2008), to the north-west of the Farm Lane site, was also similar, although the later Iron Age and early Roman component was greater proportionally. In this period the dominance of Malvernian wares, supplemented by a smaller group of E-wares, characterised the assemblage, and this was reflected in the assemblage from Farm Lane. The same range of fabrics were recorded at the two sites in the middle Roman period, although deposition seems to have eased off at Brizen Farm. The assemblage in this phase was comprised of mainly Severn Valley wares, supplemented by a few other regional coarsewares and a small number of imports. The Brizen Farm assemblage included a significant late Roman component, which was not the case for Farm Lane, indicating that although activity continued in the immediate area in this period, its focus was elsewhere, although deposition of a small amount of material in pit 5557 may suggest that the area of the site still formed part of a utilised landscape peripheral to the area of late Roman settlement.

3.1.59 At 1.1% by sherd count and 2.2% by EVE, the proportion of fine and specialist wares is very low. The range for all sites in the Upper Thames Valley to the east, as analysed by Booth (2004), is between 11% and 30% with all sites with above 20% fine and specialist wares being villas, nucleated settlements or towns. The sites confirmed as lower-status rural settlements generally had percentages between 13% and 18%. This may indicate that the site at Farm Lane was different in character to a typical rural settlement. The proximity to Gloucester and the road network meant that the inhabitants of the site would have had good access to finewares and imports if required, but the lack of these products suggests a fairly isolated settlement, with little utilisation of Roman dining practices and therefore little use for fine tablewares. That said, it is likely that the repertoire of the Severn Valley industry fulfilled much of the requirement for finewares. If tankards are included in the fine and specialist wares calculation, the total is 16.5% by EVE, within the range that would be expected. Other Severn Valley ware vessels may also have been substitutes for finewares, particularly bowls, including carinated bowls/beakers and flanged bowls such as the vessel in context 2098, which is paralleled at Wroxeter and is a samian Drag. 38 copy (Webster 1976).

3.1.60 The low occurrence of amphorae and imports other than samian indicates that the site was similar to other low-status rural settlement sites in the period but the presence of a small amount of imported material does demonstrate access to and desire for these traded wares and the influence of Roman dining practices.

Pottery catalogue

1. Medium-mouthed jar with everted rim and grooves on body. Late Iron Age to early Roman limestone-tempered ware (E60). Context 5010, fill of ditch 5009, group 9170. Phase 3a.

2. Barrel-shaped jar/beaker with upright rim and incised decoration on shoulder. Late Iron Age to early Roman sand-and-grog-tempered ware (E810). Context 5145, fill of ditch 5144, Group 9175. Phase 3a.

3. Tankard with cordoned body and bead rim. Severn Valley ware (O40). Context 5160, fill of pit 5160. Phase 3a.

4. Tankard with cross-hatch decoration and handle. Severn Valley ware (O40). Context 6160, fill of ditch 6157, Group 9182. Phase 3a.

5. Jug with everted rim and cordon at base of neck. Severn Valley ware (O40). Context 2146, fill of ditch 2145, Group 9142. Phase 3b.

6. Wide-mouthed jar/bowl with everted rim and cordon around girth. Severn Valley ware (O40). Context 5133, fill of ditch 5134, Group 9168. Phase 3b.

7. Wide-mouthed jar with grooves on body. Severn Valley ware (O40). Context 5193, fill of pit 5192. Phase 3b.

8. Medium-mouthed jar, single groove around girth. Severn Valley ware (O40). Context 5133, fill of ditch 5134. Group 9168. Phase 3b.

9. Narrow-mouthed jar with slightly bifid rim and groove on shoulder. Organic-tempered Severn Valley ware (O41). Context 5336, fill of ditch 5335, Group 9164. Phase 3b.

10. Wide-mouthed lid-seated jar with groove below neck. Severn Valley ware (O40). Context 6191, fill of ditch 6187. Phase 3b.

11. Rounded jar/bowl with pronounced in-sloping bead and flange rim. Sandy reduced ware (R20). Context 5028, fill of ditch 5027, Group 9169. Phase 3b.

12. Globular jar/beaker with everted rim and groove on shoulder. Reduced Severn Valley ware (R49). Context 5133, fill of ditch 5134. Group 9168. Phase 3b.

13. Globular jar/beaker with rusticated decoration. Medium sandy reduced ware (R30). Context 5133, fill of ditch 5134. Group 9168. Phase 3b.

14. Miniature cooking pot/beaker with diagonal line decoration. Black-burnished ware (B11). Context 5536, fill of ditch 5535. Phase 3b.

15. Tankard with bulging profile and handle. Reduced Severn Valley ware (R49). Context 2146, fill of ditch 2145. Group 9142. Phase 3b.

16. Large tankard with cordons and lattice decoration. Severn Valley ware (O40). Context 6333, fill of ditch 6332. Group 9187. Phase 3b.

17. Cordoned tankard with everted rim. Reduced Severn Valley ware (R49). Context 5650, fill of ditch 5649. Group 9154. Phase 3b.

18. Handled tankard with groove under rim and cordoned body. Reduced Severn Valley ware (R49). Context 5133, fill of ditch 5134, Group 9168. Phase 3b.

19. Cordoned tankard with groove under rim. Severn Valley ware (O40). Context 5043, fill of ditch 5042. Group 9169. Phase 3b.

20. Cordoned bowl with ovolo decoration and rivet repair. Central-Gaulish samian ware (S30). Context 6243, fill of ditch 6241. Group 9180. Phase 3b.

21. Carinated bowl with flat rim. Severn Valley ware (O40). Context 2132, fill of ditch 2131. Group 9143. Phase 3b.

22. Straight-sided dish with down-sloping flat rim. West Oxfordshire greyware (R37). Context 5193, fill of pit 5192. Phase 3b.

23. Handled bowl with flat rim and cordon. Severn Valley ware (O40). Context 5043, fill of ditch 5042. Group 9169. Phase 3b.

24. Bowl with dropped flange and in-sloping rim. Reduced Severn Valley ware (R49). Context 5618, fill of ditch 5579. Phase 3b.

25. Wide-mouthed jar/bowl with moulded rim and groove at girth. Organic-tempered Severn Valley ware (O41). Context 5132, fill of ditch 5134. Group 9168. Phase 3b.

26. Handled bowl with cordon and rivet repair. Reduced Severn Valley ware (R49). Context 5652, fill of ditch 5655. Group 9155. Phase 3b.

27. Flanged bowl with rippled rim. Medium sandy reduced ware (R30). Context 5342, fill of ditch 5341. Group 9164. Phase 3b.

28. Wide-mouthed jar/bowl with everted rim and cordons. Severn Valley ware (O40). Context 5028, fill of ditch 5027. Group 9169. Phase 3b.

29. Curving-sided platter. Reduced Severn Valley ware (R49). Context 1415, fill of pit 1416. Phase 3b.

30. Lid. Reduced Severn Valley ware (R49). Context 6293, fill of pit 6292. Phase 3b.

31. Base sherd of colander. Severn Valley ware (O40). Context 5133, fill of ditch 5134. Group 9169. Phase 3b.

3.2 Medieval and later pottery *by Kate Brady (identifications by John Cotter)*

3.2.1 A total of 107 sherds (875g) of post-Roman pottery were recovered (Table 4). These comprise small assemblages of both medieval and post-medieval pottery. For each context the total pottery sherd count and weight were recorded on an Excel spreadsheet, followed by the context spot-date. Comments on the presence of datable types were also recorded, usually with mention of vessel form (jugs, bowls, etc) and any other attributes worthy of note (eg decoration, etc). Fabric codes referred to for the post-medieval wares are those of the Museum of London (MOLA 2014), while the abbreviated medieval codes are from the Oxford pottery type-series (Mellor 1994).

3.2.2 The assemblage is in a very fragmentary and abraded condition, mostly occurring as small sherds. A few fresher sherds are, however, present in both the medieval and later wares. Some rims and bases are present, allowing the identification of some vessel types. Some material comes from the topsoil (28 sherds, 348g) but the remaining sherds were recovered from features.

3.2.3 Pottery of mid 11th to mid 13th century date was recovered from oven 5185 and ditches 9126 and 9127 in Area 1. The sherds were all in Cotswolds-type ware (*c* 1050–1250) and included sherds from two large cooking pots with sagging bases. These sherds were in a fresh condition.

3.2.4 In Area 5, one sherd of Malvern Chase medieval glazed ware was recovered from pit 5528, to the north of a settlement focus of middle Roman date. There was also Roman pottery in this pit, and the medieval sherd is likely to represent accumulation in the top of the feature. Nearby ditch 9149 contained two sherds of Malvern Chase coarseware from a plain everted-rim cooking pot with heavy sooting from use. These sherds were very abraded.

3.2.5 Pit 7003 contained a single small sherd of a mug or jug in Westerwald stoneware dated to 1580–1750.

3.2.6 The remaining sherds came from ditches in the watching brief area. Seven sherds from a stone spread (10025) included a sherd of Malvern Chase coarseware dated to 1100–1250 and the rims of two vessels with everted plain flattened rims in Cotswolds-type

ware of possible 11th to 12th century dates. Enclosure ditch 9131 contained abraded sherds of Cotswolds-type ware cooking pots dating to 1050/1100–1250.

3.2.7 The material recovered from the topsoil included cooking pot rims in Cotswolds-type ware and Malvern Chase coarseware and two feet of two different tripod pitchers, one in Cotswolds-type ware and one in Malvern Chase coarseware. This form is typical of the Wessex area and dates from the late 11th to 13th century. There was also a sherd of unidentified medieval ware. It was a soft orange brown sandy ware with a dark grey core, containing coarse iron-rich clay pellets or red-brown ironstone. This is possibly Bristol Ham Green (redware) coarseware (*c* 1120–1300) and could be from the shoulder of a cooking pot or pitcher with a decorative horizontal groove. The remainder of the material from the topsoil included a small number of sherds of post-medieval red earthenware, salt-glazed earthenware, English stoneware and transfer-printed ware.

3.2.8 The most common fabric type recovered, Cotswolds-type coarseware, is found widely in the region and represents of collection of similar fabrics and a generic term for early medieval coarsewares of 10th to 13th century date produced in the Cotswolds area of Gloucestershire, Oxfordshire and Wiltshire at mostly unknown locations (Cotter in prep.). The material from the site was probably produced fairly locally.

Table 4: Medieval and post-medieval pottery

Ware	Code	Date range	Sherds	Weight (g)
Cotswolds-type ware	OXAC	1050-1250/1300	84	518
Malvern Chase coarseware	MALV COAR	1100-1350	5	136
Malvern Chase medieval glazed ware	MALV	1250-1550	1	7
Bristol Ham Green (redware) coarseware?	MISC M/HGR	1120-1300?	1	8
Ashton Keynes ware	AK	1530-1770	1	59
Westerwald stoneware	WEST	1580-1750	1	2
English stoneware	ENGS/ENGS BRST	1700-1900	4	70
Post-medieval redware	PMR	1650-1900	3	24
Refined coarseware	REFW	1830-1900	1	8
Transfer-printed ware	TPW	1830-1900	6	43
Total			107	875

3.3 Coins *by Paul Booth*

Introduction

3.3.1 The excavation produced one Iron Age and nine Roman coins, mostly recovered by metal detecting and therefore effectively unstratified. The condition of the coins was quite variable, ranging from (occasionally) moderately good to very poor, some coins being heavily eroded. Detailed identifications were made where possible and standard references (eg to volumes of RIC) were noted, but identification to this level was only

possible in two cases; nevertheless, it was not thought that further specialist cleaning by a conservator would result in more precise identifications. Wear was recorded (approximately) using the categories defined by Brickstock (2004), but these assessments are compromised by the condition of the coins and must be treated with caution. All the coins are detailed in an Excel spreadsheet held in the project archive, the main points of which are presented in Table 5 below, where they are listed in approximate chronological order of issue. There is one silver penny minted for William I ('The Lion') of Scotland and dating from 1205–30.

Iron Age

3.3.2 The single Iron Age coin, SF 801 from fill 8012 of Roman ditch 9176, is a silver unit attributed to the Dobunnic ruler Eisu and dated to the decades immediately prior to the Roman conquest (Fig. 29, no. 1). This type (ABC 2084) is described by the editors as 'very rare' (Cottam *et al*. 2011, 106).

Roman

3.3.3 The nine coins range in date from the early Roman period perhaps up to the mid 4th century; only one coin may post-date the later 3rd century, and an early Roman emphasis is notable.

3.3.4 The earliest Roman coin is a very incomplete piece (SF 607), almost certainly a copy of a Claudian as, which was in fairly fresh condition when lost. Much more speculative is the identification of another very incomplete coin (SF 514) as another possible 'Claudian copy' as, but this is based on a subjective 'feel' and this coin cannot with certainty be dated more closely than 1st–2nd century. SF 225, certainly 1st century in date but still problematic owing to its damaged condition, is a plated denarius of Titus (AD 79–81) of which the fragmentary (anti-clockwise) obverse legend C]AES TITVS A(?)[is fairly clear (Fig. 29, no. 2). RIC has no obverse legends CAES TITVS … or IMP CAES TITVS … The legend appears to be entirely irregular. The reverse suggests the CONSEN EXERCITVS type of Vespasian (eg RIC II.1 no. 1381), with two soldiers clasping hands, but the left hand figure (only partly preserved) lacks a standard; the fragmentary traces of the legend behind the right hand figure are illegible. Like SF 607 this irregular coin was in fairly fresh condition when lost.

3.3.5 A fourth early Roman coin (SF 128), worn but not to the extent that suggests circulation over a long period, is a sestertius of Trajan, dated 114–117 on the basis of its distinctive reverse type.

3.3.6 Four later 3rd-century radiates comprise one each of Claudius II and Tetricus I and two unidentified pieces. Their condition means that it is difficult to be certain if any of these are irregular and therefore of Reece (1991) period 14 rather than 13. A single coin (SF 516) was initially tentatively assigned to the mid 4th century: this is an apparently featureless 7mm disc probably cut down from a larger piece to a module particularly characteristic of the smaller irregular issues of the period *c* AD 350–64 typified by Fel Temp Reparatio imitations (see further below).

Discussion

3.3.7 This small (and quite difficult) assemblage is notable for its early Roman emphasis. Five coins, including one of late Iron Age type, effectively form a sequence from just before the Roman conquest up to the early 2nd century and suggest coin use in this period rather than much later deposition of residual material, the latter a common pattern in rural assemblages. Four later 3rd-century coins form a further coherent group and there is no reason to suppose that they do not reflect activity on the site at that time. The only outlier is SF 516. If occupation on the site (and the associated coin list) extended to the mid 4th century then coins of Reece period 17 (AD 330–48), typically the commonest coins in rural settlement assemblages where 4th-century occupation is present, would be expected. Their absence here could be a fortuitous consequence of the small size of the assemblage, but it may be more likely that this is an irregular piece of later 3rd-century date.

3.3.8 The chronological balance of the assemblage is striking, although owing to its small size the significance of this is uncertain. A rapid scan of the evidence suggests that very small assemblages are characteristic of rural sites in the area, regardless of the chronological span of these sites; sites with a late Roman emphasis might be expected to produce larger coin assemblages in line with well understood national trends, but there are few examples of this, the most obvious cases being large or extensively excavated villas such as Great Witcombe (Davies 1998) or (more distant) Frocester (eg Reece 2000) and the roadside settlement at Birdlip Quarry (Davies 1999). The coin loss profiles of these sites are dominated by late Roman issues, as would be expected. The same is true of smaller villa assemblages such as those from Hucclecote villa (Sutherland 1933) and even Ditches, where the majority of occupation was of early Roman date but only three of 27 Roman coins pre-dated the later 3rd century (Reece 2009). Other rural assemblages, like that from Shurdington, are exiguous, and in many cases, particularly where the chronological emphasis of the site is in the early Roman period, coins are completely absent, as (from amongst many examples) from sites on the Wormington to Tirley Pipeline some 15km to the north (Coleman *et al*. 2006) and more locally at Bishop's Cleeve (eg Lovell *et al*. 2007) and Cheltenham (eg Catchpole 2002). Where coins did occur at Bishop's Cleeve, at Home Farm, all seven were of later 3rd- and 4th-century date (Reece 1998). This is not uncharacteristic of small assemblages in the region. Also fairly characteristic is the fact that all five 4th-century coins there were of Reece period 17 – coinage of the Houses of Valentinian and Theodosius are usually absent in these assemblages. As well as in the largest groups such coins occur occasionally in Cotswold sites north of Cirencester (Davies 1999, 372), including the Ditches villa, and at and near the villa at Hucclecote (Sutherland 1933; Guest 2003) but hardly at all elsewhere.

3.3.9 Lack of early (or of any) coins and a preponderance of early to mid 4th-century rather than later material are therefore principal characteristics of rural assemblages in the vicinity of Shurdington. The only group identified so far with an early:later Roman balance anything like that seen at Shurdington is also very small, and from the Sewage Works at Dymock, some 25 km WSW of Shurdington. Here four of the 12 coins are of 1st-century date and include a Claudian copy as. Guest (2007, 186) comments specifically on this unusual material, suggesting that it indicates 'urbanised or

militarised' associations. How far the early Roman coins at Shurdington (with which it is probably legitimate to include the late Iron Age piece) can be pushed in terms of a similar interpretation must remain uncertain.

Table 5: Summary of the Roman coin assemblage

SF	Cxt	Est date	Reece period	Denomination	Obverse	Reverse	Ref	Condition
801	8012	20–43?	1	AG unit 13mm	Eisu arrowhead	horse with 'arrowhead' above	ABC 2084	W/SW
607	6407	41–54	2	as? 26mm+	unbearded head l ..C]AESAR AVG[….	?		SW/
					probably Claudius			
514	5001	1–2C?		AE3 22–24mm	?			
225	2001	79–81?	4	denarius 18mm	C]AES TITVS A[(anticlockwise),	standing figures clasping hands		SW/SW
					laureate bust r			
128	1299	114–17	5	sestertius 33mm	head r [IMP CAES NER TRAIANO OPTIMO	[REGNA ADSIGNATA S C]	RIC 666	W/W
					AVG GER DAC P M TR P COS VI P P]			
530	5001	268–70	13	radiate 17mm	…]CLAVD[... Claudius II	?Mars Ultor, Mars 2b?		SW/SW
602	6002	271–74	13	radiate 16–17mm	..TET]RICVS AVG	figure stg l		SW/W
226	2001	260–96?	13/14	radiate 16–17mm	radiate head r?	?		VW/VW
229	2001	260–96?	13/14	radiate 16–18mm	radiate head r	?		VW/VW
516	5001	350–64?	18?	AE4 7mm	?	?		W/W

3.4 Metal and shale objects *by Ian R Scott*

Introduction and methodology

3.4.1 The small finds assemblage comprises 351 objects (443 fragments). Iron objects were the most numerous (n=300) but comprise mainly hobnails and nails. The only possible iron tool was recovered from the subsoil. This is the blade of what might be a peat or turf spade and is probably post-medieval or later in date. There is also an iron trapezoid buckle from a tree-throw hole.

3.4.2 Copper alloy finds are the next most numerous and include a number of personal items. Most of the personal items are Roman in date although many were recovered from post-medieval contexts. Most of the personal items are Roman in date although many were recovered from post-medieval contexts. Other materials occur in small numbers (Table 6).

3.4.3 The assemblage has fully recorded onto a MS Excel spreadsheet, which will form part of the site archive. All finds were identified where possible, and assigned to a functional category. Objects were measured as appropriate and described in text. Context information and site phasing was included in the finds spreadsheet.

Table 6: Summary quantification of metalwork by material and function

	Material									Total
Function	Silver	Copper alloy	Iron	Lead	Copper alloy/lead/ iron	Fired clay	Shale	Cinder/slag	Burnt clay	
Tool			1	1						2
Personal		19	1				1			21
Footwear			223							223
Household		5			1	1				7
Nails			60	5						60
Misc		4	7	2						16
Unid		8	8	1						18
Waste				9				2		1
Total	1	46	300	9	1		1	2	1	351

Provenance of finds

3.4.4 The majority of finds were recovered from early Roman and middle Roman contexts (Table 7). The most numerous finds were hobnails (n=223), most of which were recovered from Roman graves 2004 (n= 43, SF 200 and sample 2003) and 2111 (SFs 204 and 208 and sample 2022). The remaining hobnails were recovered in small numbers from pits and ditches. Other finds from middle Roman contexts include two finger rings, both with scalloped shoulders and 'pie-crust' settings (Fig. 31, nos 12 and 13) from ditch 5661. Other from middle Roman contexts include two refitting fragments of a small hairpin (Fig. 31, no. 16) from grave 2111. A number of personal items were found in the fills of middle Roman ditches: La Tène III brooch (Fig. 30, no.

1) from ditch 9180, a Polden Hill brooch (Fig. 30, no. 5) from ditch 9180, a hairpin with cylindrical head (Fig. 31, no. 15) and spiral finger ring (Fig. 31, no. 11) from ditch 9157.

3.4.5 There are Roman brooches from unstratified contexts: a simple bow brooch with hinged pin (Fig. 30, no. 2), a Dolphin brooch (Fig. 30, no. 3), a second Polden Hill brooch (Fig. 30, no. 4), a Wroxeter brooch (Fig. 30, no. 6), a T-shaped brooch (Fig. 30, no. 7) and a fragment comprising the lower portion of bow brooch with unpierced catch plate and a foot knob (not illustrated, cat. no. 9). There is a damaged rare fusiform brooch (Fig. 30, no. 10) from a colluvial layer. Another Roman personal item from an unstratified context was a seal box lid (Fig. 31, no. 18).

3.4.6 The only possible household item from a Roman context was a flanged and domed stud with rivet (sample 5178) from ditch 9174. There is a small bird (or probably a duck) mount (Fig. 31, no. 19) from the lid of a jug of Roman date from the subsoil.

Table 7: Summary quantification of metalwork by period/date and function (object count)

	Period							
Function	M to LIA	ER	MR	Other Roman	Med	P-med	Unph	Total
Tool						2		2
Personal		2	5	1	3	8	2	21
Footwear			223		2			223
Household			1		1	5		7
Nails		3	53		1	3		60
Misc		1	4		1	7	3	16
Unid	1		6	1	4	6		18
Waste					4			4
Total	1	7	292	2	19	35	5	351

Phase 2: Middle to late Iron Age

3.4.7 The only stratified find is an unidentified fragment of iron from ditch 9135.

Phase 3a: Early Roman

3.4.8 The number of metal finds from this phase are very limited and comprise a nail and small fragment of iron bar from ditch 9170. The most interesting are a pair of finger rings (Fig. 31, nos 13 and 31) from ditch 5661.

Phase 3b: Middle Roman

3.4.9 This phase produced the most finds (n= 292) but these include 221 hobnails and 52 nails. Two graves produced most of the metal finds; grave 2111 contained 169 hobnails (208 frags) and grave 2111 contained 6 nails (16 frags). Other finds from grave 2111 comprise a small hairpin with a knobbed head, cordons and mouldings (Fig. 31, no. 16), and a large number of tiny unidentified iron fragments recovered from soil samples (n=74). The hobnails (SFs 204, 208) were located in two concentrations by the feet of the skeleton suggesting that the person was buried with nailed shoes on their

feet. The nails and iron fragments might suggest that some sort form of box or container was buried with the deceased.

3.4.10 In grave 2004, the 34 hobnails (42 frags) (SF 200) were located adjacent to the poorly preserved feet of the deceased. No discernible nailing pattern was found. A further nine hobnails (15 frags) were recovered from a soil sample. No coffin nails were recovered.

3.4.11 Other finds from contexts of middle Roman date include a La Tène III brooch (Fig. 30, no. 1) from ditch cut 6142 (group 9180), a Polden Hill brooch (Fig. 30, no. 5) from ditch 9180, and coiled finger ring (Fig. 31, no. 11) from ditch 9157. There is also a hair pin with cylindrical knobbed head (Fig. 31, no. 15) from ditch 9153.

Phase 3: Other Roman finds

3.4.12 The only find of interest from this phase was a Dolphin brooch (Fig. 30, no. 3) from layer 3001 (colluvium or subsoil).

Phases 4 and 5: Medieval and post-medieval

3.4.13 With the exception of a nail from post-medieval pit 7003, all medieval and post-medieval finds were recovered from subsoil deposits.

3.4.14 The finds from subsoil include a medieval strap-end with solid spacer and a hinged buckle, also probably medieval.

3.4.15 A shank button inscribed for 'FIRMIN & SONS' of London, of late 19th- or early 20th-century date, a small cone-shaped object with knobbed terminal, possibly a ferrule, and a flat circular lead weight were recovered from subsoil 5001. Also from 5001 was a possible small turf or peat spade blade.

Catalogue (Figs 30 and 31)

Brooches

1. **La Tène III type brooch**. Cu alloy. L: 52mm; W: 11mm. SF 603. Fill 6143, ditch 9180. Phase 3b, middle Roman.

Feugère defined the form as his Type 11a (Feugère 1985, 247–8, pl 83, no. 1103; cf Mackreth 2011, 25, pl 13, nos 3912 and 14468). Earliest brooch from the site and dating to the late pre-Roman Iron Age, and could be as early as the second half of the 1st century BC.

2. **Bow brooch** with hinged pin, plain tapered bow with single central ridge. Some transverse lines on the central ridge. Catch plate with single circular piercing. Cu alloy. L: 58mm; W: 22mm. SF 228. Context 2001, colluvium.

Cf. An example from Leicester (Mackreth 2011, pl 58, no. 2442). Late 1st century.

3. **Dolphin brooch** with hinged pin. Plain tapered bow, solid catch plate. Cu alloy. L: 47mm; W: 19mm. SF 301. Context 3001, colluvium. Late 1st century.

4. **Polden Hill brooch**, missing foot. Upper portion of bow with ridge defined by parallel grooves, ending with pair of lenticular bosses. Spring and pin lost. Small rearhook. Cu alloy. L extant: 36mm; W: 19mm. SF 512. Context 5001, subsoil.

5. **Polden Hill brooch** with sprung pin and attachment. The bow has raised cast decoration that Mackreth termed 'lanceolate', divided by a central groove and arranged to appear saltire like (Mackreth 2011, 74, pl 47, no. 2004). The catchplate is unpierced and has a small pointed foot knob, flat on one side. Cu alloy. L: 68mm; W: 22mm. SF 601. Fill 6017, ditch 9180. Phase 3b, middle Roman.

There are two Polden Hill brooches with similar decoration from Kingscote, Glos. (Mackreth 1998, 120–2, fig. 67, 1.37–1.38).

6. **Wroxeter brooch**. Mackreth's Wroxeter type 1.c with pin held by an axle bar between two plates. Decorated with lenticular bosses on the bow. Cu alloy. L: 64mm; W: 12.5mm. SF 520. Context 5001, subsoil.

Cf. Mackreth 2011, 112, pl. 77, nos 5697 and 5706.

7. **T-shaped brooch**, small with two cross cut lozenge panels on the broad tapered bow. Hinged pin. Much of foot and catchplate missing. Cu alloy. L: 30mm; W: 15mm. SF 609. Context 6002, subsoil.

Cf Mackreth, 2011, 95, pl 63, nos 2794 and 2799

8. **Small Trumpet brooch**. The cast ring or tab at the head of the brooch is incomplete. Cu alloy. L: 39mm; W: 13mm. SF 606. Layer 6233. Phase 3b, middle Roman.

Mackreth Trumpet variant 1.3b1. Distribution very much centres on the Severn Valley. Cf Mackreth 2011, 121, pl 82, 5288.

9. (not illustrated) **Brooch fragment**. Catch plate, solid, with foot knob. Cu alloy. L extant: 34mm; W: 20mm. SF 131. Context 1002, subsoil.

10. **Fusiform or shuttle-shaped brooch** (Hull form 273) with hinged pin, incomplete example with edges damaged one end missing. Across the width of convex (outer) face there is a raised plaited rope pattern. Cu alloy. L: 26mm, W: 12.5mm. SF 224. Context 2001, colluvium.

A rare brooch form, see examples from Neatham, Hants (Hull 1986, 106, fig. 73 no. 83), Dorchester, Dorset (Crummy 2014, 165, fig. 115 no. 38), and more especially three examples from Nor'nour, Isles of Scilly (Hull 1967, 56, fig. 23 nos 212–14).

Finger rings

11. **Spiral or coiled finger ring**. One end of the coil tapers slightly, the other end is decorated with four parallel lines. Cu alloy. D: 19mm. Sample <5034>. Fill 5459, ditch 9157. Phase 3b, middle Roman.

Probably Roman, although coiled finger rings occur in Bronze Age and Iron Age contexts and also in post-Roman contexts. Finger ring of Cool Group II (Cool 1983, 223–6, fig. 6:1, 4).

12. **Finger ring** with scalloped shoulders and piecrust setting. Cu alloy. W: 25.5mm; Ht: 23.5mm. SF 522. Fill 5660, ditch 5661. Phase 3a, early Roman.

Cool Group XVIa (Cool 1983, 259–63, fig 6.3, no. 1, map 6.2). Probably in use in the 3rd and 4th centuries. Complete. The setting appears to be solid with no evidence for an intaglio. cf SF 523.

13. **Finger ring** with scalloped shoulders and piecrust setting. Incomplete hoop. Cu alloy. Ht: 22.2mm. SF 523. Fill 5660, ditch 5661. Phase 3a, early Roman.

Similar to SF 522, except that the setting is empty suggesting that the ring originally was set with an intaglio.

Other personal items

14. (not illustrated) **Bead**. Small near-spherical shale bead. L: 4.6mm; D: 5.5mm. SF 531. Context 5001, subsoil.

15. **Hairpin** with cylindrical knobbed head, probably originally with cross-hatched decoration. Cu alloy. Stem incomplete. L extant: 35mm. SF 506. Fill 5444, ditch 9153

Belongs to Cool's Group 23 (Cool 1990, 170 and fig.12, nos 1–5). Possibly in use in later 2nd and early 3rd century.

16. **Hairpin** with tiny knobbed head above cordons and curved moulding. Two fragments. Cu alloy. L extant: *c* 66mm. SFs 201 and 202. Grave 2111, context 2113.

This hairpin belongs to Cool's Group 3 sub-group A with head cut into the shank of the pin (Cool 1990, fig 2, nos 4–6 and 11). The pin may be almost complete, in which case it is quite short.

17. **Nail cleaner**, cast, with flat-topped knobbed head with cross-hatching below. The tip is missing but groove of nail cleaner blade is clear. Cu alloy. SF 518. Context 5001, subsoil.

The nail cleaner has no suspension loop and belongs to the small group of nail cleaners with knobbed heads defined by Eckardt and Crummy (2008, 132, fig. 74, nos 68 and 399).

Other finds

18. **Seal box lid**. Circular lid with a single hole in centre and a small hinge. Roman. Cu alloy. L: 23mm; D: 19.5mm. SF 223. Context 2001, colluvium.

Circular seal box lid of Andrews design D13 (Andrews 2012, 15 and 17)

19. **Bird (dove?)-shaped mount**. Slightly worn with no modelling of the wings or on the tail. This could have been the head of a hairpin or possibly attached to vessel. The lack of modelling may be due to wear. Roman. Cu alloy. L: 21mm. SF 513. Context 5001, subsoil.

This duck or bird mount could have been the head of a hairpin (Cool 1990, Group 18, 168, fig. 11, 1; see also Cool 1983, vol. 5, fig. 24, nos 6–11). The form of the bird can vary. Cool tentatively suggested that these may be a late form of hairpin. The dove was

sacred to Venus and in the art of early Christian church was a symbol of the soul at peace.

20. **Needle**. Large needle of lenticular cross-section. The eye is missing. Cu alloy. L: 102mm; W: 4mm. SF 521. Context 5001, subsoil.

Possible leather working needle, date uncertain.

3.5 Spindle whorls *by Ian R Scott and Ruth Shaffrey*

3.5.1 Two fired clay spindle whorls were recovered from the subsoil in Area 5. One is near complete and ornamented with vertical grooves around its edge (Fig. 31, no. 21). The other is a small fragment and is of disc-shape with slightly hollow faces, approximately like Walton-Rogers' type B1 (2007, 25). Its form and perforation size of 9mm suggest a date from the 5th or 6th century onwards, but a medieval date may be most likely. The 4g weight of the fragment, accounting for 20% of the whole, suggests an original weight in the region of 20g and a likely function spinning fine thread.

Catalogue (Fig. 31)

21. **Spindle whorl.** Fired clay. Dia: 24mm x 25mm; Th: 19mm. SF 509. Context 5001, subsoil.

(not illustrated) **Spindle whorl.** Fired clay. Straight vertical edges. Faces slope downwards towards perforation of *c* 9mm. About 20% survives. Dia: 45mm, max Th: 7mm. Weight 4g. Ctx 5001, subsoil.

3.6 Worked stone *by Ruth Shaffrey*

3.6.1 A total of 15 items of worked stone were retained. The largest component of the stone assemblage are the querns, which account for seven items in total. A possible quern fragment was recovered from the terminus of medieval ditch 9126 (fill 1319) and was the only item recovered from post-Roman features. A fragment of saddle quern was found in Roman ditch 9197 (10232). This is made from a coarse-grained feldspathic sandstone, probably May Hill Sandstone (see below). Given that the main period of use for this gritty stone was during the middle Iron Age, it seems likely that this fragment represents Phase 2 activity.

3.6.2 The remaining five querns are from features of Roman date or are residual in later contexts. One example of a possible Millstone Grit saddle quern was found in early Roman ditch 9175 (5145; Fig. 32, no. 1). It has been shaped and finished with pecking all over. Because saddle querns of southern England tend to have flat or only slightly dished grinding surfaces, its steeply dished grinding surface means it might be more accurately described as a mortar or grinding stone. It could be residual from earlier activity but saddle querns are regularly recovered from Roman contexts and appear to have remained in use well beyond the introduction of the rotary quern in the early to middle Iron Age. They are likely to have fulfilled a different role – either a different stage in the grain processing system, or for the processing of an entirely different (probably plant-based) substance.

3.6.3 Four fragments are from rotary querns and millstones. One Millstone Grit millstone fragment was found in Phase 3b pit 5564 (5566; Group 9155). The circumference of this does not survive, but its size indicates that it is from a millstone of >72cm. A further fragment could be from a millstone but it is not possible to be certain as the circumference does not survive. This fragment is of Old Red Sandstone and was found in Roman pit 5504 (5505).

3.6.4 Two upper rotary quern fragments are of Old Red Sandstone and were recovered from middle Roman posthole 5011 (5012) and the subsoil. Both fragments are of typical Roman form for querns of this stone type with a profile that is tapered in thickness towards the centre, whilst the example from the subsoil also has the lateral handle socket that usually accompanies these querns (Fig. 32, no. 2).

3.6.5 Five stones can be identified as whetstones (deliberately shaped sharpening tools) or hones (natural stones utilised in the same way). Whilst they are categorized as whetstones and hones, it is possible that they were used for an array of processing, grinding and polishing tasks working with materials other than metal blades.

3.6.6 One fragment of rectilinear whetstone was found in middle Roman enclosure ditch 9103 (1415; SF 121). It is the only example of a manufactured sharpening tool from the site. Three stones are examples of cobbles that have been utilised as hones or processors. They demonstrate a range of wear that may, or may not, be related to working metal tools. One example from ditch 9196 (10003) is smoothed and worn on both faces with faceting along the edges. An example from middle Roman ditch 5024 (5025, Fig. 33, no. 3) has some polish and one bevelled end, suggesting a variety of uses, whilst another example from the terminus of early Roman ditch 9182 (6160) has a similarly bevelled end. A flat slab with a double bevelled edge was unstratified and its use-wear is not specific enough for it to be dated.

3.6.7 An oolitic limestone ball from pit 5500 (5552, Fig. 33, no. 4) has been very neatly pecked into an almost perfect sphere. It could be a ballista ball, but its recovery on this site, with an absence of other weapons, suggests that use as a weight is more likely. One final piece of stone seems most likely to be architectural given it is made from oolitic limestone. It could conceivably be a quern with its pecked surface and diameter of 52cm, but it does not have any wear consistent with this and the material, whilst not impossible, would be unusual.

3.6.8 A small hollowed piece of chalk appears to have formed naturally, but may have been used as a miniature cup. It was found in middle Roman ditch 9142 (2146, Fig. 33, no. 5).

Catalogue of worked stone (Figs 32 and 33)

Saddle quern/mortar (**Fig. 32, no. 1**). Coarse-grained feldspathic sandstone, probably Millstone Grit. The thick, steep sides are pecked while the base is flat and smooth. The grinding surface is concave, quite deep and smooth. Measures >230 x >210 x 88mm. Ctx 5145. Fill of ditch 9175. Phase 3a, early Roman.

Saddle quern? Probable May Hill sandstone. Fragment with pecked flat surface worn smooth and rounded edges and base. Possibly manufactured from a boulder.

Measures 56mm thick. Weighs 525g. Ctx 10232. Fill of ditch 9197. Phase 3a, early Roman.

Upper rotary quern fragment (**Fig. 32, no. 2**). Old Red Sandstone. Quartz Conglomerate from the Wye Valley. Broken across lateral handle socket, which measures 115mm long x >25mm wide x 40mm deep. Neatly pecked all over. The quern is tapered in thickness towards the centre and has slightly rounded sides that slope in. There is a shallow basin shaped hopper measuring approximately 110mm diameter. Measures *c* 410mm diameter x *c* 60mm diameter eye x 75mm thick at edge. Weighs 3049g. Ctx 5001. Subsoil.

Upper rotary quern fragment. Old Red Sandstone. Quartz Conglomerate from the Wye Valley. With pecked flat upper face and pecked straight sides. Grinding surface is worn smooth and is slightly concave. Measures 430mm diameter x 48mm thick. Weighs 924g. Ctx 5012. Fill of posthole 5011. SF 500. Phase 3a, middle Roman.

Probable rotary quern or millstone fragment. Old Red Sandstone. Quartz Conglomerate from the Wye Valley. Large fragment that lacks any original edges but has two flat opposing faces – one is roughly worked and the other is flat and smooth. Measures 80mm thick. Weighs 1605g. Ctx 5505. Fill of pit 5504. Phase 3, Roman.

Lower millstone fragment. Millstone Grit. Slightly angled disc with indeterminate edges (missing), small circular eye of 50mm diameter, flat roughly worked base and pecked grinding surface. Measures >720mm diameter x 65–80mm thick. Ctx 5566. Fill of pit 5564. Group 9155. Phase 3b, middle Roman.

Possible quern fragment. Medium-grained brown sandstone. Has curved smooth surface that could be a quern outer surface but no other faces survive and it doesn't look quite regular enough to be a quern. Weighs 1516g. Ctx 1319. Fill of terminus of ditch 9126. SF 120. Phase 4, medieval.

Whetstone. Fine-grained dark grey micaceous sandstone. Cobble, flat with sub-rectangular section. Heavily smoothed and worn on both faces and slightly facetted along the edges. Weighs 111g. Ctx 10003. Fill of ditch 9196. Phase 3a, early Roman.

Whetstone. Very fine-grained grey sandstone. Fragment of neat rectilinear whetstone with sharp arrises. Both ends are damaged. Measures>39 x 25 x 14mm. Weighs 17g. Ctx 1415. Fill of enclosure ditch 9103. SF 121. Phase 3b, middle Roman.

Hone. Fine-grained beige sandstone. Flat stone with double bevelled edges. Measures >82 x >62 x 14mm thick. Weighs 127g. Unstratified.

Hone. Lias, grey. Rounded cobble or piece of stone that is double bevelled at one end. Ctx 6160. Fill of terminus of ditch 9182. SF 604. Phase 3a, early Roman.

Hone (**Fig. 33, no. 3**). Grey fine-grained sandstone. Cobble, not shaped but very definitely used. One flat face has some polish on it and one of the ends is bevelled. Measures 112 x 64 x 22mm. Weighs 268g. Ctx 5025. Fill of ditch 5024. SF 501. Phase 3b, middle Roman.

Sphere/stone ball (**Fig. 33, no. 4**). Oolitic limestone. Stone worked into an almost perfect sphere. No obvious tool marks but slightly flatter on one side. Weighs 168g. Ctx 5552. Fill of pit 5550. Phase 3b, middle Roman.

Possible cup (**Fig. 33, no. 5**). Chalk. Resembles a miniature cup with some sort of iron deposits inside it. May be natural. Measures 27mm diameter x 18mm thick. Ctx 2146. Fill of ditch 9142. Phase 3b, middle Roman.

Discussion

3.6.9 A number of things can be discerned from the assemblage of worked stone. The stones that were used as whetstones/hones/processors indicate that tool maintenance and other rubbing/smoothing and grinding tasks were common at the site. However, none of these tools is made from the stone once identified as Kentish Rag and now thought to be a product of the Wealden sandstone beds (Allen and Scott 2014), whetstones of which are very widely distributed across Roman Britain. Instead, they are made from naturally occurring cobbles and stones, which suggests a more casual approach to tool sourcing.

3.6.10 The querns and millstones are made of a combination of Old Red Sandstone and Millstone Grit. Unlike the whetstones and associated tools, querns of these stone types had to be imported to the area. However, they are the most widely occurring quern types in the region and would have been easily obtainable.

3.6.11 The presence of the querns is clear evidence for the processing of grain at or very close to the site. Much of this probably represents household grinding but the millstone fragment is evidence for some centralization nearby in the form of a mill. It is not possible to determine from the stone whether it was powered by water or animals/humans, but the Hatherley Brook runs to the east of the site and it may have been possible to utilize this brook for power. The recovery of the millstone fragment at Farm Lane is the only evidence for a Roman-period mill in the immediate area, but it appears to have been a relatively common feature of Roman sites in the region, with centralised milling also evidenced by millstones at numerous sites within a 15–20km distance, for example at Brockworth and Witcombe to the west, Bourton and Farnworth to the east, Chedworth to the south and Cleevelands to the north (Shaffrey 2015). Some of these mills would have managed grain processing for the immediate area or villa estate, but others would have fed into a system of flour production that probably supplied the urban centres at Cirencester and Gloucester (Shaffrey 2018).

Thin-section report on saddle quern from ditch 9197

3.6.12 In thin-section, this is seen to be a poorly-sorted generally coarse-grained slightly feldspathic sandstone with mostly long contacts between grains. There is a high level of porosity combined with low cementation, although there are small areas of quartz overgrowths. Rock fragments are common, and whilst not studied in detail, include fragments of siltstone, limestone, quartzite and sandstone containing sericite. This is not an exact match for anything in the author's reference collection, but seems most like samples of May Hill Sandstone.

3.7 Fired clay *by Cynthia Poole*

Introduction

3.7.1 Fired clay amounting to 6339 fragments weighing 11,924g was recovered from a wide range of features dated from Iron Age to post-medieval. The bulk of the assemblage was found in late Iron Age and Roman contexts. Half the assemblage (by weight; 87% by count) was recovered from sieved samples and accounts for the very low mean fragment weight (MFW) of 2g, though the very fragmented and poorly preserved character of the assemblage is also reflected in the hand-collected material, which produced a MFW of only 7.6g. Fired clay is not intrinsically dateable, except in the case of certain diagnostic forms. Very few of these are present, but those that could be identified are compatible with the Iron Age–Roman phasing of the assemblage. The few fragments found in features dated outside this range are all indeterminate in form. Three tiny scraps (3g) were found in Neolithic/Bronze Age flint scatter 1145 and the 23 fragments (188g) in post-Roman deposits are all likely to be residual Iron Age or Roman material.

Methodology

3.7.2 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), which whilst not specifically designed for fired clay provide appropriate guidance. The record includes quantification, fabric type, form, surface finish, organic impressions, dimensions and general description. Fabrics were characterised on macroscopic features and with the aid of x20 hand lens to assess finer constituents.

Fabrics

3.7.3 Two broad fabric groups were identified. Fabric group A was composed of a fine smooth micaceous clay or occasionally silty clay, that in some examples contained a low density of other inclusions comprising quartz sand, shell or calcareous grits, or organic voids. This fired to a wide range of shades and hues of red, orange, brown and grey, often with evidence of a black core. Fabric group Q consisted of a sandy clay, sometimes micaceous, containing a moderate to high density of quartz sand and often red iron oxide inclusions. It fired most commonly to shades of red, orange or brown, sometimes with a black or grey core. The solid geology underlying the site was the Jurassic Charmouth Mudstone Formation, and it is probable that clay deposits weathered from this were the source material for the fired clay.

Forms

3.7.4 There is little to distinguish the Iron Age from the Roman fired clay and at all periods the assemblage is dominated by fired clay with a single shaped surface or entirely amorphous fragments. Those pieces with a single moulded surface, most commonly flat, but including pieces with a curving convex or concave surface, have been divided where possible into broad groups of structural pieces and portable furniture depending largely on the quality of the surface finish, though much of it has been classified as indeterminate (3112 fragments, 3933g).

Structural fired clay

3.7.5 The structural fired clay (3080 fragments, 6082g) was assigned to this category on the basis of surface finish and comparison with material from two *in situ* ovens of early Roman (5560) and medieval (1585) date. Most of the structural material probably derived from ovens and there was little evidence that suggested any originated from hearths. The fragments designated as oven structure usually had a roughly moulded flat or curving surface, often characterised by finger marks, both linear grooves and fingertip depressions from pressing and shaping the clay. Pieces with the surface burnt dark grey or black probably represent areas of the oven floor or lower walls in direct contact with the fire. Thickness of the fragments was variable but was usually less than 25mm, although a small number of thicker fragments up to 66mm thick survived. Generally, the exterior of any structure has not survived as even in high temperature activities only the internal wall surface is fully fired whilst a decrease in heating left the exterior essentially unfired except close to openings or vents and has therefore eroded away or disintegrated. The back broken face often reflects the effect of decreasing firing having sheared from the unfired structure at the interface between well-fired and underfired clay. Some pieces have a wedge-shaped cross-section, which often arises where the clay has been smoothed over a previously finished area; examples were found in oven 1585.

3.7.6 Fragments from fill 8101 of ditch 9176 may represent the lining of an integral pedestal from within a kiln. One fragment had a curving convex roughly moulded surface with fingertip depressions and a rough flat base edge, probably a rough bonding surface and the back surface is of a similar character. This may have formed the rendered surface layer of a pedestal built around a block of stone or upstanding natural clay. The second fragment possibly formed part of the top of the pedestal as it has an even convex fairly smooth surface curving to a more roughly moulded surface with finger grooves that suggest it may come from the junction with the oven/kiln wall.

3.7.7 Fragments from ditch 9157 (fill 5459) formed a flat plate pierced by a large circular flue 130mm in diameter. The surfaces are smooth and well finished and on some pieces are flat and on others curving, undulating or with finger depressions. The majority of the pieces are quite thin, measuring 8–20mm compared to the vent edge, which measures 42mm thick. The backs of all pieces are smooth and rounded, typical of the effect where unfired clay backing structure has washed or eroded off. Some pieces have a burnt blackened surface. There is one piece that may be pierced by a rounded vertical perforation possibly *c* 25mm in diameter; the surface of the perforation has been heat-discoloured to brown. The combination of large vent and small perforation may indicate that two different structural elements are represented, such as a perforated suspended floor of a kiln and an oven or kiln dome plate with a large vent.

3.7.8 A fragment with a smooth hand-moulded convex surface with undulations from finger marks and faint chaff impressions (fill 10232 of ditch 9197) may also derive from the edge of a vent (Fig. 34, no. 1). The piece forms a straight rounded edge on one side and a concave curving vertical sided edge on the other. The concave edge could form

an opening of about 80mm diameter either in the vertical face of an oven wall or in the top of the dome.

3.7.9 A small quantity of material had evidence of vitrification on the surface, suggestive of higher-temperature activities often associated with metalworking furnaces. In only one case (ditch 9135, fill 2167) was this sufficiently intense and with the typical colour gradation of black at the inner surface through mauve to bright red-orange at the exterior to suggest furnace lining. A few examples with light vitrification and cindering (postholes 1014 and 1036) was insufficient to indicate furnace structure with any degree of certainty, as this can occur in other structures such as pottery kilns.

3.7.10 There is little evidence for the use of wattles to reinforce or support clay structures. From late Iron Age posthole 1601 one fragment had two small stem impressions 6mm wide and from Area 6 (fill 6249, ditch 9180 and fill 6333, ditch 9187) a few fragments produced more typical evidence of interwoven wattles 10–16mm in diameter including one vertical sail and a larger pole *c* 60mm diameter. The latter could be interpreted as evidence of building daub, but it may only represent a stronger reinforcement at a key point within an oven such as over the flue or stokehole arch. Although wattles could have been used to reinforce oven walls there is little evidence that this actually occurred from the archaeological record and wattle reinforced structure is better interpreted as a suspended floor, possibly the drying floor in crop processing structures.

Portable oven/hearth furniture

3.7.11 A variety of forms of portable oven or kiln furniture (147 fragments, 1909g) were identified, though most identifications were tentative on account of the fragmentary character of the assemblage, with most pieces less than 40mm in size. Many of the pieces identified as portable furniture of indeterminate form were designated as such solely on the basis of surface finish and firing characteristics. Many had only a single moulded surface, though some pieces had two surfaces at right angles which could be edge fragments from a range of object types including triangular perforated bricks, rectangular plates or firebars.

3.7.12 Triangular perforated bricks: One certain and six possible examples of triangular bricks were found, all made in fabric A. The definite piece was a corner fragment (fill 5358, ditch 9163; Fig. 34, no. 2) with a smooth well-finished surfaces, though very little of the triangular face was present. It has an estimated thickness of 60mm and a length in excess of 72mm. The side surface was pierced at an angle by a perforation 13mm in diameter widening to 18mm long at the surface. There were also two other fragments with parts of perforations 12 and 16mm in diameter. The uncertain fragments exhibited only two surfaces identified as parts of the triangular face and edge based on the characteristic of one well-smoothed face and slightly rougher edge. However, other forms such as firebar or the edges of rectangular plates cannot be ruled out. The triangular perforated bricks are essentially an Iron Age form but continued in use during the Roman period. The definite example was found in an otherwise unphased ditch (9163) in Area 5 and the remaining uncertain pieces were scattered across areas

1, 5, 6 and 8 within ditch fills phased from late Iron Age to middle Roman, apart from late Iron Age roundhouse posthole 1601.

3.7.13 Plates: Examples of three oven plates (4 fragments, 50g), all made in fabric A, were found in Area 5 within two gullies (9117 and 5206) and a pit (5528). The fragments from both gullies had very smooth flat well-finished surfaces. The example from gully 9117 had a curving edge possibly indicating an oval form and the other, which measured over 24mm thick, was pierced by a perforation *c* 27mm in diameter. The example from the tree-throw hole measured 21mm thick and had a rougher flat moulded surface, damaged on one side, and the possible remains of edge.

3.7.14 Firebars: A single possible example of a firebar, made in fabric A, was recovered from Area 5 (pit 5528, fill 5530). The small fragment had two slightly rough flat surfaces set at right angles and measured over 26mm thick. It has only been tentatively identified as part of square-sectioned firebar.

3.7.15 Pedestals: Three examples of pedestals were identified from Areas 1, 5 and 6. Two were cylindrical or conical, measuring *c* 90 and 100mm in diameter. One made in fabric A had a faint grey vitrified veneer over the surface (posthole 1014) and the second, possibly from the base of the pedestal, was made in fabric Qv (fill 5115 of ditch 9171). The best preserved example is a rectangular or pyramidal block (Fig. 34, no. 3) tapering to the top and made in fabric A (ditch 6241). It measures *c* 100mm wide, 104mm in breadth tapering to *c* 70mm at top and 145mm high. The moulded surfaces are smooth, flat or slightly dished with abrupt rounded arrises. It is pierced by a perforation 12mm in diameter set 34mm from the top. There is no evidence that the perforation was used for suspension and the differential discolouration of the surfaces during firing suggests this was used as a pedestal in a kiln.

3.7.16 A hand-squeezed lump (Fig. 34, no. 4) was found in roundhouse gully 9117 of middle Iron Age date. It was made in fabric A with shelly inclusions and measured 34 by 52mm wide and over 48mm long. It is a roughly rounded oblong hand-moulded lump with depressions from fingers squeezing the clay and has been pierced by two bi-conical perforations *c* 9 and 10–11mm in diameter tapering to *c* 5–6mm running longitudinally and by a smaller third perforation 3–6mm diameter running widthways at right angles between the two larger ones. The purpose of perforations and the function of the lump are unclear, but may have been used as an ad hoc support or prop in a kiln or oven.

Discussion

3.7.17 The use of fired clay was most prolific during the late Iron Age and middle Roman phases with a decrease between in the early Roman phase. A few indeterminate scraps were recovered from flint scatter 1145 and the few fragments from post-medieval deposits are probably residual late Iron Age or Roman material. Unphased fragments made up 15% of the assemblage: in character they are the same as the phased material and are probably of late Iron Age–middle Roman date.

3.7.18 There was very little difference in the condition of the fired clay between areas or periods. Nearly all material was fragmentary with a low MFW except for Area 8, where

the higher MFW may be skewed by the small quantity retrieved from the area. More significant is the difference between structural material and portable furniture, which shows the furniture to be better preserved, possibly because once damaged and unusable it was discarded rapidly in convenient features, whereas structures may have been abandoned and left to collapse though weathering and erosion.

Phase 2: Middle to late Iron Age

3.7.19 Fired clay phased to the middle to late Iron Age (620 fragments, 1698g) occurred in greatest density in Area 1 with small quantities present in Areas 2, 5, 6 and 10. Oven structure (183 fragments, 751g) was the dominant form, accounting for half the fired clay (by weight) in this phase and comprised primarily fragments of oven wall surface. Part of a circular vent, the only piece found in Area 10, may represent a side or top opening in an oven or kiln wall.

3.7.20 A small quantity of furnace or smithing hearth lining was found in Area 2 in oval enclosure ditch 9135 where it was associated with a small quantity of slag, cinder and hammerscale suggesting the presence of higher-temperature industrial activity, probably smithing on the evidence of the slag. Four-post structure 1036 in Area 1 produced a quantity of fired clay from its postholes, all probably structural. This may imply an oven structure existed in the vicinity of the building. Lightly vitrified fragments found in two of the postholes are probably floor or wall lining from the most heavily fired area of flue wall or floor of an oven or kiln rather than evidence of a furnace, as there was no associated slag indicative of industrial activity.

3.7.21 Portable furniture (65 fragments, 301g) was poorly represented and badly preserved at this period resulting in only tentative identifications in relation to form and function. These included an unusual ‘hand-squeezed lump’ and two possible triangular bricks, the most common diagnostic form in Iron Age assemblages. The hand-squeezed lump and one possible triangular perforated brick were associated with roundhouses. Other pieces had been discarded in ditches.

Phase 3a: Early Roman

3.7.22 There was a distinct decrease in the quantity of fired clay (421 fragments, 961g) found in early Roman features compared to the preceding period and nearly all was recovered from ditches mainly in Areas 5 and 6 with just a few pieces from Areas 1, 8 and 10. The bulk of this was indeterminate in form though again probably a mix of structural and portable furniture. Only three pieces were tentatively identified as furniture, comprising two triangular bricks and a cylindrical pedestal base.

Phase 3b: Middle Roman

3.7.23 Fired clay (3853 fragments, 7409g) was most densely concentrated in Areas 5 and 6 with smaller quantities in Area 1, 2 and 8. As in earlier periods ditches were the major repository for material. In Area 1 the main square enclosure ditch (9103) produced a high proportion of the fired clay. Elsewhere the fired clay was distributed across a range of features with only one significant group from oven 5560, which produced 40% (by weight) of the fired clay in this period (2120 fragments, 2938g). The oven was of

keyhole shape in plan consisting of a main circular chamber and a narrow linear flue projecting from it. The fired clay was hard-fired, black tabular blocks of lining that allow little speculation regarding the superstructure. It was very similar to the *in situ* heavily fired natural clay encompassing the subsurface chambers. There is no evidence that the oven was subdivided into a lower and upper chamber and no portable furniture was associated. The carbonised plant remains from the fill consisted entirely of charcoal, which included roundwood and oak charcoal, representing the remains of fuel used in its firing. A quantity of burnt stone found in the fill was probably used to maintain the heat. The intensity of firing suggests it was heated to temperatures above those used for domestic cooking: its general form is characteristic of pottery kilns. If such an identification is correct the lack of any form of a suspended floor forming two chambers suggests this is a single-chambered, single-flued kiln as described by Swan (1984, 113–14). Such a kiln may have used reject pots to support the kiln load for firing or utilised portable furniture.

3.7.24 Although no portable furniture was directly associated with oven 5560, there is a scatter of items that may be considered to be portable furniture. The greatest concentration occurred in Areas 5 and 6, with a scatter of one or two items in Areas 1, 2 and 8. Most pieces had been discarded in ditches or gullies and none can be related to a primary location of use The few pieces from this phase identified as portable furniture included fragments of plates, a possible fire bar, triangular perforated bricks and most convincingly the pyramidal perforated block, which would have served as a pedestal supporting a plate or firebars. The block was found some distance to the south of the kiln in Area 6 and may imply other kilns were present elsewhere in the vicinity of the site.

3.7.25 Kiln 5560 is situated in the corner of an enclosure or field peripheral to the main areas of occupation. It lies close to an eight-post structure which could represent a workshop or store associated with the production process. A shallow oval hollow (5528) lined with stone, which lies about 9m north of the kiln, produced a few small fragments of oven plate and firebar. It is uncertain whether this could have formed another oven or kiln base or the base or foundation for some other associated structure. A number of large, though shallow, pits in the same area may have originated as quarry pits for clay. The type of kiln represented by 5560 is concentrated primarily in the east of England, but from the late 2nd century onwards examples occur in peripheral areas with examples in south Oxfordshire and north Wiltshire.

Phase 4: Medieval

3.7.26 A single feature has been assigned to this phase, based on the feature and the character of the carbonised plant remains. This is *in situ* oven base 1585, located in Area 1. It measured 1.54m long, up to 0.91m wide and 0.27m deep and was cut into the natural. It retained little evidence of any surviving structure. There was no evidence of *in situ* burning of the surrounding clay, nor was any lining present. In the base of the main oven chamber there were several large stones, but it is unclear whether these had been heated. Overlying the stones and oven base was a thick charcoal-rich layer (1587) over which was a deposit of yellowish orange clay (1588)

containing a high density of reddened, heated and fired clay infilling the upper level. Although the fired clay was densest in fill 1588 the quantity recovered was less than that from fill 1587, suggesting much of the reddened clay was only lightly heated and did not survive the flotation process. This oven produced significant quantities of grain, suggesting it was a crop-processing oven, which would not require high temperatures. The layer of burnt clay (1588) overlying the charcoal layer is interesting in that it must represent part of the superstructure, possibly the remnants of a drying floor rather than a collapsed dome enclosing the structure. Fired clay from this was recovered entirely from sieved samples and consisted of small scraps interpreted during recording as wall lining and amorphous walling, though a solid clay drying floor is likely to leave fragments similar in form. Within deposit 1587 some form of fired clay brick (or possibly ceramic building material) was found, which may represent a piece of oven furniture. The form of the structure is not typical in character of ovens of the preceding Iron Age or Roman periods and its dating as medieval is to be preferred.

Catalogue of illustrated objects (Fig. 34)

1. **Structural fragment** possibly oven wall or dome pierced by circular vent. Dia: *c* 80mm. Th: 40mm+. B: 44–62mm+. L: >80mm. Fabric A. Ctx 10232, ditch 9197. Phase 3a, early Roman.

2. **Triangular perforated brick**. Corner fragment with smooth, well-finished surfaces, the edge pierced by two perforations, one 13mm dia widening to 18mm at the surface and the second across a missing corner 12mm dia. Th: *c* 60mm. L: 95mm+. Fabric A. Ctx 5358, ditch 9163. Unphased. Object date: Iron Age–early Roman.

3. **Pyramidal perforated block**. Rectangular cross-section tapering to top; top and base flat. Perforation 12mm dia. Th: 100mm. B: 70–104mm. L: 145mm. Wt: 823g. Fabric A. Ctx 6243, ditch 62441. Phase 3b, middle Roman.

4. **Hand-squeezed lump**. Irregular oblong lump with finger marks and thin conical perforations. Th: 34mm. B: 52mm. L: 48mm+. Fabric ASSh. Ctx 1498, roundhouse gully 9117. Phase 2, mid–late Iron Age.

3.8 Ceramic building material *by Cynthia Poole*

3.8.1 A small assemblage of ceramic building material (10 fragments, 780g) was recovered from subsoil, ditches and pit fills. Two small fragments of mid-19th–20th century field drain were intrusive in Roman ditches. The Roman tile was made in an orange-red fine sandy clay fabric and consisted mostly of thick flat tile 22–35mm thick, which are probably all fragments of brick. The only diagnostic pieces were two fragments of box flue corner from contexts 5391 and 7004 and an imbrex from layer 10025. One of the flue tiles had thick walls (27 and 30mm thick) and a band of diagonal combed keying on one face. It is probably of mid to late Roman date. The tile represents debris entering the deposits after the settlement had gone out of use as a result of agricultural activity, probably originating from a local villa with heated rooms. The small size of the assemblage indicates that few, if any, contemporary masonry structures utilising tile were situated in the locality.

3.9 Slag *by Lynne Keys*

3.9.1 A very small quantity of material (1.2kg), initially identified as slag, was recovered by hand on site and from soil samples processed after excavation. Numerous samples had been processed but very few contained anything other than heat-magnetised natural grit, sand and stones.

3.9.2 For this report the assemblage was examined by eye and tested with a magnet. The material was categorised on the basis of morphology; a magnet was used to test for iron-rich material and detect smithing micro-slags in the soil adhering to slags. Each slag or other material type in each context was weighed except for the smithing hearth bottom, which was individually weighed and measured for statistical purposes.

3.9.3 The assemblage is tiny and exceptionally fragmentary; almost no large slags were recovered except for one smithing hearth bottom from ditch 9103. Phase 2 curvilinear ditch 9135 contained very occasional hammerscale flakes, a tiny quantity of iron-rich undiagnostic slag and some tiny slag runs (total weight 129g), which is unlikely to represent more than one episode of smithing in the late prehistoric period; there is no evidence that any smelting activity took place.

3.10 Flint *by Michael Donnelly*

Introduction

3.10.1 The excavations brought to light a small assemblage of 76 flints (Table 8). The assemblage included one small flint scatter containing 27 flints but was otherwise very dispersed amongst the archaeological features, with much of the material likely to be residual. Diagnostic artefacts were rare and the majority of the tools and cores recovered could have belonged to a range of periods. The only truly diagnostic piece was an obliquely blunted microlith of early Mesolithic date. One knife from the flint scatter is likely to date to the late Neolithic to early Bronze Age while a second knife from the scatter was undiagnostic.

Table 8: The flint assemblage

Category type	
Flake	35
Blade	10
Bladelet	6
Blade index	31.37% (16/51)
Irregular waste	3
Chip	8
Core rejuvenation flake	1
Crested piece	1
Core single platform flake	1
Core multi-platform flake	1
Core levallois flake	1
Core bipolar flakes	1
Scraper end	1
Scraper side	1
Microlith	1
Knife backed	1
Knife other	1
End truncation	1

Category type	
Retouch blade	1
Retouched flake	1
Total	76
No. burnt (%)	11/76 (14.47%)
No. broken (exc. chips) (%)	30/76 (39.47%)
No. retouched (exc. chips) (%)	8/76 (10.53%)

Raw material and condition

3.10.2 The assemblage was in a very mixed state but still contained 22.7% fresh pieces, 34.9% that displayed light levels of edge damage as well as 40.9% that displayed moderate or heavy edge damage (Table 9). One rolled piece was also recovered. The assemblage also had very mixed levels of cortication but moderate levels were most common (36.2%) as well as equal amounts with either heavy or very heavy cortication. These figures suggest that much of the assemblage was residual. The small scatter (1145) also contained a mix of surface conditions, but here fresh or lightly damaged edges (75%) and moderate levels of cortication (50%) were far more common. Both the blades and a bladelet recovered from this scatter were in far worse condition, suggesting they may be residual. The remaining core, knifes and flake assemblage displayed enough similarity in their surface condition to suggest that they derived from a contemporary knapping event.

Table 9: Flint by condition and cortication

Condition	Total	%	Cortication	Total	%
Fresh	15	22.73%	None		
Light	23	34.85%	Light	16	27.59%
Moderate	19	28.79%	Moderate	21	36.21%
Heavy	8	12.12%	Heavy	10	17.24%
Rolled	1	1.51%	Very heavy	11	18.96%
Total	66			58	

The assemblage

3.10.3 The assemblage contained considerable quantities of blade forms, making up 16 of 51 blanks (31.37%). Since the assemblage was in fact made up of numerous smaller sets of flint, some of these may have been very blade heavy and most probably date to the Mesolithic or early Neolithic period. This was supported by the presence here of an early Mesolithic microlith. In contrast, scatter 1145 – the largest single assemblage and a good candidate for an *in situ* deposit – was dominated by flakes (12/15, blade index of 20%). All blade forms present in the assemblage appeared residual and this would have altered the flake index for that scatter to 100% flakes. The scatter also contained a multi-platform flake core. Such an assemblage of flakes, flake cores and knives would most probably date to the later Neolithic or early Bronze Age.

3.10.4 Other than scatter 1145, no feature possessed more than two flints, often with very different levels of preservation indicating that most are residual. Subsoil layer 5001 did yield 12 flints with another from the overlying topsoil. These flints were in very mixed

condition with blades and bladelets alongside later prehistoric core forms. One bipolar core was present and indicates the very careful use of any available flint source for knapping in areas of England away from the main sources of chalk.

3.10.5 Cores and related production and maintenance debitage were recovered from several contexts. The aforementioned bipolar core was recovered from the subsoil besides a levallois core of later Neolithic or early Bronze Age date. A lightly damaged and heavily corticated crested blade was found in scatter 1145 as well as a multi-platform flake core. A single platform flake core was found in ditch 1298 while another Roman ditch (9145) contained a core rejuvenation flake. Most of these cores were clearly residual but do suggest a Neolithic or later focus at odds with the numerous blades and the core maintenance pieces.

3.10.6 Tools were common at 10.5%, three of which originated in scatter 1145. These consisted of two knifes on flakes and a retouched/utilised flake. The remaining tools were scattered across the excavation area and consisted of an obliquely blunted microlith from the subsoil, a retouched blade from layer/spread 6289, an end scraper from ditch 9174, fill 5320, a side scraper from the subsoil and an end-truncated flake from ring gully 9131, fill 2039.

Discussion

3.10.7 The key points that arise are the presence here of Mesolithic activity, subsoil collection and the *in situ* scatter 1145. Early Mesolithic activity is shown here by the recovery of the solitary obliquely blunted microlith as well as some or all of the blade debitage, although some of these blanks are very probably early Neolithic in date. Early Mesolithic tools such as microliths are very often found as stray finds, and, given their use as armatures this is hardly surprising. Such tools are easier to spot than their later Mesolithic counterparts. This can lead to early microliths being common stray finds while actual early Mesolithic sites are generally far rarer than late Mesolithic examples. Gloucestershire and its surrounding counties have considerable evidence for Mesolithic activity and this tool adds to the growing pattern of human exploitation of this county.

3.10.8 The subsoil contained a very mixed assemblage and is likely to relate to more modern destruction of archaeological horizons rather than any preserved land surfaces. This layer did yield an interesting bipolar core as well as a nice example of a levallois core of late Neolithic date from the topsoil. Bipolar cores are now more commonly being identified in parts of central England away from the sources of chalk. Examples have recently been found at Banbury, Oxfordshire (Donnelly 2014) and Shottery, Warwickshire (Donnelly 2018). These can often relate to the re-use of objects such as axes as was seen on the pre-barrow land surface at Hazelton North in Gloucestershire (Saville 1990, 174) These can date to a range of periods but many of the recent examples are Neolithic in date.

3.10.9 Scatter 1145 represented the only potentially intact assemblage from the excavation. The scatter was very small and clearly had some issues with admixture. This may simply have meant that 1145 was deposited onto an existing land surface containing earlier material. The condition of the earlier forms has been discussed above and

would appear to justify describing them as residual. The condition of the flake core, flakes and knifes suggests that they may be contemporary and date to the later Neolithic or early Bronze Age. This period would appear to be the main phase of flint-related activity here and probably suggests some limited focus that was subsequently largely truncated away by later activity. Surface spreads or middens are often the source of considerable Neolithic artefact collections, but they only survive in agricultural regions of England under rare circumstances.

3.11 Clay tobacco pipe *by John Cotter*

3.11.1 A single piece of clay pipe weighing 7g was recovered from the subsoil. This is a stem fragment 74mm long and in very fresh condition. It is fairly slender, and thickening towards the bowl end. The surfaces have a lateral smoothing or slight burnishing and it has a fairly narrow stem bore diameter of *c* 2mm. A date in the late 18th or first half of the 19th century is likely.

4 HUMAN SKELETAL REMAINS

By Lauren McIntyre

4.1 Introduction

4.1.1 The human skeletal remains comprised seven discrete articulated inhumation burials, three burnt bone deposits and four unburnt disarticulated teeth from one context. The deposits were all Roman in date.

4.1.2 Five of the inhumations were from earth-cut graves (skeletons 2005, 2078, 2112, 8005 and 8023, in grave cuts 2004, 2077, 2111, 8006 and 8024 respectively). Skeletons 6356 and 6357 and the four disarticulated teeth were found in fill 6389 of ditch 6385 and did not appear to have associated grave cuts. Skeleton 6356 was truncated by a land drain.

4.1.3 Two of the skeletons were lying in an extended supine position (2005 and 2078). The skull and upper body of skeleton 2078 was truncated by ploughing. Two skeletons (6357 and 8023) were in a flexed position, on their sides with bent knees. The remaining three skeletons (2112, 6356 and 8005) were in crouched positions, on their sides with the knees brought up towards the chest. The legs of skeleton 2112 in particular were extremely contracted, which may suggest that the legs had been tied.

4.1.4 Iron hobnails were found in close association with the foot bones of skeleton 2005. A number of metal small finds were also found in association with skeleton 2112.

4.1.5 Of the burnt bone deposits, one was an urned cremation (2024) from ditch 2023 and two (1608 and 2070) were unurned. Of the unurned deposits, 1608 was within earth-cut pit 1607 and 2069 was found in shallow earth-cut pit 2070, which had been disturbed by root action and plough truncation.

4.2 Methodology

4.2.1 All human remains were examined in accordance with the recommendations set out by the CIfA, BABAO and English Heritage guidelines (Brickley and McKinley 2004; Mays 2004, 3–6). The articulated skeletons were assessed for their condition (Grade 0–5+, after McKinley 2004, 16), completeness (0–25%, 26–50%, 51–75%, 76–100%) and fragmentation ('low', <25% of the skeleton fragmented; 'medium', 25–75% of the skeleton fragmented; or 'high', >75% fragmented).

4.2.2 The age and sex of each skeleton were estimated, where possible, using relevant standards (Brothwell 1981; Lovejoy *et al*. 1985; Miles 1962; Miles 2001; Moorrees *et al*. 1963; Workshop of European Anthropologists 1980; Scheuer and Black 2000; Buikstra and Ubelaker 1994; Phenice 1969). A summary of the age categories used in this study is presented in Table 10. Juveniles were not sexed, as there are currently no accepted macroscopic methods available.

Table 10: Age at death categories

Age group	Age range

Pre-term	<37 weeks gestation
Neonate	Birth–1 month
Infant	1–12 months
Young child	1–5 years
Older child	6–12 years
Adolescent	13–17 years
Young adult	18–25 years
Prime adult	26–35 years
Middle adult	36–45 years
Mature adult	> 45 years

4.2.3 Standard metrical analysis was carried out and, where relevant, employed to estimate stature (Trotter and Gleser 1952; 1958; Trotter 1970) and calculate skeletal indices, which can be used to explore general bone physiology and proportions (Bass 1981). Non-metric traits, or minor anomalies in the skeleton, were systematically recorded for adults with reference to Berry and Berry (1967) and Finnegan (1978). Non-metric traits are not normally considered to be indicative of pathology. Many have been found to be under the influence of genetics, while some have been linked to biomechanics and occupational patterns (Finnegan 1978). Any dental or non-dental skeletal pathologies were recorded with reference to standard texts (eg Aufderheide and Rodríguez-Martín 1998; Ortner 2003).

4.2.4 Disarticulated teeth were identified and quantified per context. The minimum number of individuals (MNI) represented was estimated by counting the number of repeated teeth and by taking age into account (Buikstra and Ubelaker 1994). Where possible, observations were made pertaining to age, sex, and pathology using the methods described above. The teeth were also checked against the articulated remains in order to determine whether they belonged to any of them.

4.2.5 Deposits containing cremated bone were subjected to whole earth recovery and processed by wet sieving, to clean sort the burnt bone into >10mm, 10–4mm and 4–2mm fractions. The smallest fraction sizes (2–0.5mm) were not sorted but were rapidly scanned for identifiable skeletal remains and artefacts. Estimations of the proportions of bone present within the 2–0.5mm fractions were made and recorded in the archive. The unsorted 2–0.5mm residues were not included in the total bone weights, as they were not deemed significant enough to alter this substantially in any of the cremation deposits.

4.3 Results

4.3.1 All human skeletal remains are described individually below. Osteological summaries for each unburnt articulated individual are also presented in Appendix A.

Articulated skeletons

4.3.2 Skeleton 2005 was highly fragmented and very incomplete, but with bone surfaces which were in good condition. The skeleton was estimated to have been a possible

female prime adult (26–35 years). The skeleton only had three molars present so this age estimation is tentative: age assessment with reference to dental attrition is less reliable if a full set of molar teeth is not present (Brothwell 1981).

4.3.3 Fifteen permanent teeth and one tooth position were present. One tooth had been lost post-mortem. Five teeth had carious lesions, and 14 teeth had slight to medium deposits of dental calculus (Brothwell 1981, 150). An enamel pearl was observed on the right maxillary canine, on the mesial side of the tooth root (Hillson 1996, 98).

4.3.4 The incomplete and fragmentary nature of the skeleton precluded collection of metrical and non-metrical data. No skeletal pathology or abnormality were observed.

4.3.5 Skeletons 8005 and 8023 were both less than 50% complete and were highly fragmented. Surface preservation was scored at grades 1–2 (McKinley, 2004: 16). Considering completeness, fragmentation and surface condition their overall preservation was judged to be fair. Both skeletons were prime adult (26–35 years) possible males. However, these estimations are tentative, because limited indicators were present and age was estimated from an incomplete set of molar teeth.

4.3.6 The platymeric index, which measures the degree of flattening of the femoral shaft front to back (Brothwell 1981, 88–9), could be calculated for skeleton 8023. The result classified 8023 as platymeric, meaning the shape of their femoral shafts showed a tendency towards flattening rather than being rounded.

4.3.7 One non-metric trait was observed on skeleton 8023 and was present on the cranium in the form of an accessory supra-orbital foramen (an extra blood vessel opening above the orbit). This is likely to have a genetic aetiology (Berry and Berry 1967; Veldmann 2013, 75).

4.3.8 Ante-mortem chips were observed on four anterior teeth from skeleton 8023 and may be diet or activity related. In addition, both skeletons had dental calculus and dental caries. The latter involved eight teeth and six of them were from skeleton 8005. Skeleton 8005 also had one periapical cavity and substantial ante-mortem tooth loss (11/19 tooth positions affected). In addition, although the crown of the left mandibular first premolar of skeleton 8005 had been lost (possibly due to attritional wear rather than disease, eg caries), the alveolar bone had begun to remodel and grow over the superior end of the root.

4.3.9 Skeleton 8005 had osteoarthritis affecting several joints including the cervical spine, the right acromio-clavicular joint, the right hand (distal phalanx of the first digit and in one proximal phalanx for either the second or third digit) and the left knee (Rogers and Waldron 1995).

4.3.10 The preservation of skeletons 6356, 6357, 2078 and 2112 ranged from poor to fair. Fragmentation was medium or high and the surface condition of bones ranged from grades 1 to 3 (Brickley 2004, 16). Three skeletons (2005, 6356 and 2078) were less than 50% complete and two (6357 and 2112) were 51–75% complete. Where completeness was lower, this was due to truncation.

4.3.11 The skeletons included four adults and one adolescent. Of the adults, one was a possible male young adult aged 18–25 years (2112), one a possible female prime adult aged 26–35 years (2005), and one was a probable male prime adult aged 26–35 years (6357). The fourth adult (2078) could not be aged any further than >18 years and sex could not be estimated. The adolescent skeleton (6356), which is unsexed (see methods, above) was estimated to have been 13–17 years.

4.3.12 Metrical analysis could only be undertaken to explore the femoral shaft index for skeleton 2112. In this case, both femora were classified as platymeric which is consistent with the findings from the contemporary assemblages at Lankhills in Winchester and at Cirencester (Clough and Boyle 2010, 358; Wells 1982).

4.3.13 A total of 89 teeth were present, from four dentitions (skeletons 2005, 2112, 6356 and 6357). Calculus was the most commonly observed dental pathology and was observed as slight or medium deposits (Brothwell 1981) on 67 out of a total of 89 teeth from all four skeletons. Skeleton 2112 also had ante-mortem chips on the occlusal edge of the right maxillary second incisor and one tooth had been lost ante-mortem.

4.3.14 Skeletons 2112 and 6357 both had cribra orbitalia (type 3 and type 1 respectively; Stuart-Macadam 1991, 145) and herniated discs (Schmorl's nodes). A healed fracture was observed on the left first metacarpal of skeleton 2112. A minor congenital/developmental abnormality (symphalangism) was observed in the right foot of skeleton 6357, with the intermediate and distal phalanges of one of the digits being fused at the joint.

Disarticulated teeth

4.3.15 Of the four disarticulated teeth, two were unidentified tooth roots (possibly molar), the crowns having been completely destroyed by dental caries. Of the remaining teeth, one was a left maxillary third molar, with a carious lesion, located on the buccal side of the crown. The other tooth was an unsided maxillary second premolar. The root of this tooth had not fully developed suggesting an age of approximately 8–10 years (stage 9–10, R ¼ – R ½: Moorees *et al*. 1963). In view of this, it is possible that these teeth belonged to a minimum of two individuals, one adult and one juvenile.

4.3.16 The disarticulated teeth were found in the same ditch fill as skeletons 6356 and 6357. However, none of the disarticulated teeth belonged to either of these skeletons: skeleton 6356 (an adolescent aged 13–17 years) had all four second premolars present, and the only teeth missing from the dentition of skeleton 6357 were the left maxillary canine and right mandibular incisor. Therefore, it is considered that the four disarticulated teeth belong to further, undiscovered burials interred either elsewhere in ditch 6385, perhaps within close proximity.

Burnt bone

4.3.17 It was unclear whether burnt bone fragments from context 1608 were human or animal. Therefore, these will not be discussed further in this report, although details have been recorded in the archive. An osteological summary is presented in Table 11 for deposits 2024 and 2069.

Table 11: Osteological summary, cremated bone

Cremation	Samples	Total weight	Colour	Age	Sex	Non-metrics/ pathology/ other comments
2024	2004	22.7g	White 70%, Grey 10%, Blue 10%, Black 10%	U	U	Parietal foramen. Burnt and unburnt animal bone present
2069	2005–2008	4.6g	White 85%, Grey 15%	U	U	-

Key: U = unknown

4.3.18 Only 22.7g of cremated bone was recovered from cremation 2024, and 4.6g from 2069 (Tables 12–13). These bone weights are extremely low, considering the average weight of archaeologically recovered cremations is typically 600–900g (McKinley 2013). The low weight of 2069 is unsurprising considering that the feature had been disturbed by root action, and truncated by ploughing: this may not, therefore, represent the full amount of bone that was originally deposited. It is also possible that the low weight is reflective of the fact that the deposit does not represent a primary burial, but is redeposited pyre debris or a cenotaph (a feature which has the appearance of a grave and may contain pyre goods and/or debris, where very little or no cremated bone is characteristic; McKinley 2004, 10; 2013, 153). The deposit lacked charcoal or pyre debris, however, so it is considered more likely that it represents a truncated primary cremation burial.

Table 12: Cremation 2024 – summary of bone weights

	Skeletal Element (g)								
Sample	***Skull***	***Axial***	***Upper limb***	***Lower limb***	***Unid.lLong bone***	***Unid. hand/foot***	***Unid. joint surface***	***Unid. other***	***Total***
2004	7.1g (31.28%)	0.2g (0.88%)	1.0g (4.41%)	0.5g (2.20%)	4.3g (18.94%)	1.0g (44.1%)	0.1g (0.44%)	8.5g* (37.44%)	22.7g (100%)

Table 13: Cremation 2069 – summary of bone weights

	Skeletal Element (g)								
Sample	***Skull***	***Axial***	***Upper limb***	***Lower limb***	***Unid. long bone***	***Unid. hand/foot***	***Unid. joint surface***	***Unid. other***	***Total***
2005	0.1g	0.7g	-	-	0.4g	0.5g	0.2g	1.5g	3.4g (75.56%)
2006	-	-	-	-	-	-	-	0.2g	0.2g (4.44%)
2007	0.1g	0.1g	-	-	-	-	-	0.1g	0.3g (6.67%)
2008	0.1g	-	-	-	-	0.2g	0.1g	0.3g	0.7g (15.56%)
Total	0.3g (6.67%)	0.8g (17.78%)	0g (0%)	0g (0%)	0.4g (8.89%)	0.7g (15.56%)	0.3g (6.67%)	2.1g (46.67%)	4.6g (100%)

4.3.19 Deposit 2024 appears to have been undisturbed, and was contained within a ceramic vessel, so it is very likely to represent the whole original deposit. Further, it likely represents a cremation burial, because it was contained within an urn.

4.3.20 A summary of fragmentation per cremation is presented in Table 14. Fragment size ranged from 17.8mm (a fragment rib shaft; 2069) to 26.0mm (a fragment of cranial vault; 2024). In deposit 2024, the largest proportion of bone came from the 10–4mm sieve fraction (10.1g, 44.49% of the total weight). In deposit 2069, the largest proportion of bone came from the 4–2mm fraction (2.1g, 45.65% of the total weight). This is unsurprising considering the small size of the total bone weights for these contexts.

Table 14: Summary of fragmentation

Cremation	Total weight	>10mm	10–4mm	4–2mm	Max. frag size
2024	22.7g	5.4g	10.1g	7.2g	26.0mm, cranial vault (parietal?)
2069	4.6g	1.3g	1.2g	2.1g	17.8mm, rib shaft

4.3.21 Summaries of skeletal representation are presented in Tables 12 and 13. The skull was most frequently observed in 2024, while the axial skeleton was most frequently observed in 2069. A high proportion of skull fragments is a pattern often noted in cremation analysis reports because the skull vault is more easily identified than other bones, even within the smaller fractions. Most of recovered bone was unidentified. In both contexts, smaller proportions of unidentified bone pertained to the upper and lower limbs and hands/feet, but most of unidentified bone could not be assigned to an anatomical region. Larger proportions of unidentified bone may be expected where fragmentation is high, as a result of difficulty in identifying smaller bone fragments to a specific bone.

4.3.22 The vast majority of burnt bone fragments were white in colour; at least 70% of bone from both contexts. This indicates a generally efficient cremation process with the majority of bones being burnt at a temperature in excess of 600°c. This is a common observation in most archaeological cremation burials (McKinley 2006, 84). This may indicate that, in the cases presented here, the majority of the corpse was placed in a location on the pyre where maximum and consistent heat and oxygen supply was available (McKinley 2013, 158). However, this is a tentative assumption as all the recovered bone weights were very low with a good proportion unavailable for examination. The remainder of the bone from 2069 was coloured grey. In 2024, the remainder of bone was grey/blue and black.

4.3.23 No repeated skeletal elements were present in either context, suggesting that a minimum number of two individuals were present (one from each context). No evidence for estimating age, sex or for pathology was observed. One fragment of cranial bone from 2024 had a parietal foramen (an extra blood vessel opening), which is a common non-metrical trait.

4.3.24 Several fragments of unburnt and charred animal bone were present in 2024 (Table 15). A total of 1.1g of unburnt bone and 0.6g of charred animal bone was present. None of the animal bone could be identified further than as medium-sized mammal.

Table 15: Summary of pyre/grave goods

Cremation	Sieve fraction	Weight	Notes
2024	>10mm	0.4g	1x fragment unburnt bone, medium mammal
2024	10–4mm	0.6g	2x fragments unburnt bone, medium mammal
2024	10–4mm	0.6g	2x fragments charred bone, medium mammal
2024	4–2mm	0.1g	1x fragment unburnt bone, medium mammal

4.4 Discussion

4.4.1 The assemblage comprised a total of seven unburnt articulated skeletons, four disarticulated teeth from one context, and two deposits of burnt bone. Together they represent a minimum number of ten individuals.

Articulated skeletons

4.4.2 Of the articulated skeletons, six were adults and one was an adolescent. Of these, two were possible 26–35-year-old males, one was a possible male (18–25 years), one was male (26–35 years), one was an unsexed adult, one was an unsexed adolescent, and one was a possible female aged 26–35 years.

Burial context

4.4.3 Isolated single graves or small clusters of burials found in close association with non-funerary features are not unusual in rural areas of Roman Britain (Pearce 2013, 79). Examples of burials found in non-funerary contexts such as ditches exist elsewhere in Gloucestershire at sites such as Claydon Pike (Miles *et al*. 2007), Frocester Court (Price 2000), Syreford Mill (Timby 1998) and Tockington Park Farm (Masser and McGill 2004). It has previously been suggested that skeletons buried in contexts such as boundary ditches, trackways, houses and work sites may represent the remains of social outcasts (Philpott 1991, 232; Pearce 2013, 96). This supposition is based on the assumption that interment of a corpse in a pre-existing non-funerary feature requires significantly less effort than digging a formal grave, and that there was an absence or lack of accompanying funerary ritual (Philpott 191, 232). However, more recent research has indicated that these types of burial are actually no different in character from the range of burial types that may be found in formal cemeteries within the same geographic region (Pearce 2013, 97).

4.4.4 Where crouched burials of Romano-British date are discovered, these are typically characterised as being indicative of the continuation of indigenous, pre-Roman burial practices (Philpott 191, 55). Crouched positioning of the deceased persists in the burial record well into the 3rd century, particularly in rural locations (Philpott 1991, 57 and 222). For example, a group of 12 crouched inhumation burials were found at Hucclecote Link Road, dating to between the 2nd and 4th centuries (Thomas *et al*. 2003). Examples of crouched burials found in conjunction with contemporary extended/supine inhumations and cremation burials are also found elsewhere in Gloucestershire, as at Gambier Parry Lodge cemetery at Kingsholm (Philpott 1991, 55).

In view of this, the small burial assemblage from Farm Lane is typical for the region and period.

Demography, physical attributes and health

4.4.5 The assemblage is notable in that it represents a predominantly male group and lacks young children, infants and elderly adults. However, it is important to bear in mind that the sexes and ages estimated for these skeletons have been hampered by the insufficient preservation of indicators.

4.4.6 Limited information on physical attributes was obtained. One non-metric trait was observed in skeleton 8023, an accessory foramen or opening in the skull; this is common. Stature and cranial indices could not be calculated. Of the post-cranial indices, the platymeric index could only be calculated for skeletons 2112 and 8023. In both, the index was consistent with flattened shafts, which is in keeping with contemporary populations. The femoral shaft has become more rounded over time, with earlier British populations being more likely to exhibit front to back shaft flattening (ibid.; Waldron 2007, 46). The reason for this is not clear, but it may be an adaptive response to increased mechanical stress as a result of physical activity (Brothwell 1981, 88–9). Squatting, and mineral and vitamin deficiency are other possible contributory factors (ibid; Waldron 2007, 46). The results calculated for skeletons 2112 and 8023 are consistent with those from contemporary cemetery populations from Lankhills in Winchester, and Cirencester, where the majority of both male and female femora were platymeric (Clough and Boyle 2010, 358; Wells 1982).

4.4.7 The most frequent pathology observed in the group was dental disease, including calculus, caries, periodontal disease and ante-mortem tooth loss. Dental calculus is mineralised plaque on the surface of the teeth. Calculus formation has a complex aetiology where diet, levels of calcium and phosphate in the blood, fluid consumption, oral environment, bacterial composition, non-dietary chewing, using teeth as tools, and oral hygiene practices can all be contributory factors (Roberts and Manchester 1995, 55; Hillson 1996, 259; Lieverse 1999, 224–5). Dental calculus forms as a result of dental plaque deposits becoming mineralised; formation of plaque deposits is often exacerbated by poor oral hygiene (Roberts and Cox 2003, 131).

4.4.8 Periapical cavities and ante-mortem tooth loss may occur as a result of progressive dental caries, which largely develop as a result of sugary dietary components. This may indicate that the diet the skeletons contained sugar, starch and/or fermentable carbohydrates which stick to the teeth and allow the proliferation of bacteria around and between the teeth and facilitates the development of dental caries (Rugg-Gunn *et al*. 1987; Hillson 1996, 278; Moynihan 2012, 107). Roberts and Cox (2003, 134) have suggested that an increase in caries prevalence in Roman Britain (from the preceding Iron Age) may have been partly due to increased consumption of dried fruit such as figs and dates. Clinical studies have shown that dried fruit is more likely to be cariogenic than fresh fruit, as the drying process changes the composition of the fruit and releases more sugars (Moynihan 2002, 565). Other sugary, cariogenic foods likely to have been available during the Roman period in Britain include honey and a fermented grape juice called sapa (Allsop and Miller 1996, 516; Garnsey 1999, 139).

4.4.9 In addition to dental conditions, there was some evidence for skeletal pathology, including osteoarthritis, cribra orbitalia, Schmorl's nodes, trauma and symphalangism. Osteoarthritis was the only skeletal pathology observed on the early Roman skeletons. It is the most commonly occurring joint disease found in archaeological human populations, although multiple joint involvement on an individual aged between 26–35 years, as observed here, is less typical in this disease (Roberts and Manchester 2005, 136; Rogers and Waldron 1995). This could suggest that mechanical stress played a greater role than age in causing the disease in this individual.

4.4.10 Cribra orbitalia, observed as increased porosity on the roofs of the orbits, was present on skeletons 6357 and 2112. The lesion has been linked to a number of conditions including iron deficiency anaemia and vitamin deficiency (Stuart-Macadam 1991; Ortner 2003, 102–6; Steckel *et al*. 2006, 13). Vitamin B deficiency has also been cited as a possible cause (Walker *et al*. 2009). However, when only observed macroscopically, cribra orbitalia is best used only as general indicators of stress (Steckel *et al*. 2006).

4.4.11 Schmorl's nodes were also observed in both individuals, affecting one thoracic vertebra in skeleton 2112 and two of the lumbar vertebrae of skeleton 6357. Schmorl's nodes are caused by herniation of the intervertebral disc, and are most likely to develop in the (mid to lower) thoracic spine because these vertebrae are more prone to torsional, rotational movement (Pfirrmann and Resnick 2001; Dar *et al*. 2010, 673). Mechanical loading may exacerbate the presence and location of Schmorl's nodes, and torsional movement, in particular, is thought to be a major causal factor (Dar *et al*. 2010, 673). However, the development of Schmorl's nodes may also be linked to normal variation in vertebral shape (Plomp *et al*. 2012, 579).

4.4.12 Skeleton 2112 had a healed fracture at the proximal end of the left first metacarpal. The precise type of fracture was unclear as the bone was well healed and aligned at the fracture site. Furthermore, examination was hindered as a result of the bone being incomplete, with the majority of the metacarpal shaft being absent. Fractures to the proximal end of the first metacarpal to tend to occur as a result of direct trauma, eg punches or falls (Galloway 1999, 154).

4.4.13 Lastly, symphalangism, or fusion between two phalanges at the joint, is a congenital condition, observed on 6357. It is fairly common and would have been of no great significance to the overall health and well-being of the individual.

4.4.14 Generally speaking, the range and type of pathology in the assemblage is as would be expected for an assemblage of this date and type (Roberts and Cos 2003). However, the dental and joint disease are perhaps more prevalent than would be expected for a predominantly young group of individuals.

Burnt bone deposits

4.4.15 The deposits of burnt bone included one which may be animal and has not been considered further. The other two deposits did not contain any evidence of age, sex, non-metric traits or pathology. The minimum number of individuals represented by the deposits was two.

4.4.16 Bone weights recovered from the two pits were well below the expected weight range for a cremated adult (1000–2400g; McKinley 2000a, 26; 600–900g for archaeologically recovered cremations: McKinley 2013). Context 2069 was truncated by ploughing, and disturbed by root action: it is therefore impossible to determine how much bone has been lost since the original deposit was made. Context 2024 may contain the remains of a token burial deposit (contained within a small urn) where only a small quantity of cremated material was selected from the pyre for burial (McKinley 2000b, 42–3; 2004, 10). The presence of several fragments of burnt/charred animal bone may indicate that joints of meat were placed on the pyre with the corpse: this is a common finding in cremation burials from all over Roman Britain (Pearce 2013, 36–7). The deposits are unlikely to represent redeposited pyre debris, as no evidence of fuel waste was found.

4.4.17 The majority of bone fragments were white in colour, indicating a generally efficient cremation process where bone has become fully oxidised and the burning temperature was in excess of 600°c (McKinley 2004, 11). The small proportion of grey, blue and black fragments may pertain to anatomical regions of the body that were placed more peripherally on the cremation pyre, where temperature fluctuation is greatest, and full oxidation of the bone not always possible (McKinley 2013, 158).

5 ENVIRONMENTAL EVIDENCE AND RADIOCARBON DATING

5.1 Animal bone *by Lee G Broderick*

Methods

5.1.1 Recovery of material on site was principally through hand-collection. Environmental samples were also taken and these were sieved at 10mm, 4mm, 2mm and 0.5mm fractions. This material was recorded in the same way and is considered together below. Specimens from unphased contexts were not recorded. Taxonomy follows Wilson and Reeder (2005) for mammals and Gill and Donsker (2013) for birds. The word 'caprine' is used when referring to an animal that may be a sheep (*Ovis aries*) or a goat (*Capra hircus*).

5.1.2 All specimens were identified with the aid of the OA reference collection. Bones were recorded using the diagnostic zones described by Serjeantson (1996) for mammal limb bones, Strid (2012) for mammal mandibles and Cohen and Serjeantson (1996) for birds.

5.1.3 The separation between sheep and goat was attempted on the following elements: mandible; dP3; dP4; M1; M2; M3; distal humerus; distal metapodials (both fused and unfused); distal tibia; astragalus and calcaneum, using the criteria described in Boessneck (1969), Payne (1985), Kratochvil (1969) and Halstead *et al*. (2002).

5.1.4 Wear stages were recorded for P4, dP4, M1, M2, and M3 of domestic cattle (*Bos taurus taurus*), caprines and pig (*Sus ferus domesticus*), both isolated and within mandibles, following the methods described in Grant (1982) and Payne (1987) and the ages described by Jones (2006) and Jones and Sadler (2012). Horse (*Equus caballus*) incisor wear stages follow Levine (1982), withers height calculations follow May (1985) and separation between the various equid species was attempted on the molars, premolars, metapodials and astragali according to criteria laid out by Davis (1980).

5.1.5 A mammal bone epiphysis is described as 'fusing' once spicules of bone have formed across the epiphyseal plate, joining epiphysis to metaphysis, but while some gaps are still visible between the epiphysis and diaphysis. An epiphysis is described as ‘fused’ once these gaps along the line of fusion have disappeared. Fusion stages follow Silver (1969). Only fused bones were measured, with measurements taken following the criteria laid out by von den Driesch (1976) and presented in Appendix B.

5.1.6 Bone condition was recorded following Behrensmeyer (1978).

Results and discussion

5.1.7 A total of 9390 animal bones was recovered from the site, mostly associated with contexts associated with Phase 3b, with Phase 3a also making up significant proportions of the assemblage (Table 16). Seventy-seven per cent of the material was hand-collected, with 23% resulting from environmental sampling (Table 17). Environmental sampling particularly increased the number of indeterminate, micro-mammal (mouse-sized mammals), bird and amphibian bones recovered (Table 17). This is typical of such sampling strategies (Payne 1972) and we should expect that the

numbers of these groups of species would increase were all the excavated material to be sieved in the same way. That said, all of these categories of fauna were rare on the site even in the environmental samples, which suggests that in this case their rarity in the total assemblage is a fair reflection of the reality.

5.1.8 The bones were generally in moderate condition (Lyman 1996, stage 3) with specimens from Phase 3b being the poorest and those from Phase 3a the best (Fig. 35). Some 5786 hand-collected specimens were recovered from ditches and a further 1835 from pits, together accounting for 90% of the assemblage. Contexts of particular interest are highlighted below. Given the small sample size in each phase, NISP figures are used throughout as providing the most likely reflection of living animal proportions on the site.

Table 16: Total NISP (Number of Identified SPecimens) and NSP (Number of SPecimens) figures per phase. Higher proportion highlighted

	Phase						
Species	**2**	**3**	**3a**	**3b**	**3c**	**4**	**5**
Domestic cattle	**23**	**22**	**71**	**222**	**1**	**7**	**2**
Domestic cattle?	3	2	3	14			
Domestic cattle/red deer				**1**			
Caprine	**34**	**20**	**39**	**169**		**12**	**4**
Caprine?	2		1	10		1	
Caprine/roe deer							
Sheep	5	3	5	16		1	
Pig	**21**	3	17	29		1	
Pig?	3		2	1			
Horse	3	**20**	**21**	**99**		**2**	
Horse?			4	4			
Dog		2		11			
Cat?			**1**				
Red deer				1			
Small rodent		1					
Wood mouse				3			
Water vole	1						
Field vole				5			
Micro mammal	2			23		1	
Small mammal	1	4		7		2	
Medium mammal	77	47	54	231		38	
Large mammal	224	245	589	992	2	41	28
Total mammal	399	369	807	1838	3	106	34
Common frog/common toad						1	
Total amphibian	0	0	0	0	0	1	0
Bird				1			
Passeriform						**1**	

Total bird	0	0	0	1	0	1	0
Total NISP	399	369	807	1839	3	108	34
Total NSP	833	451	1672	3832	3	289	34

Table 17: Specimens recovered from sieved environmental samples and hand-collected (unsieved samples). Higher proportion highlighted

Species	Sieved	Unsieved
Amphibian	**1**	0
Bird	**1**	**1**
Micro mammal	**42**	1
Small mammal	**10**	8
Medium mammal	228	**774**
Large mammal	240	**2938**
Indet.	1436	**2786**
Total NISP	522	3722
Total NSP	1958	6508

Phase 2: Middle to late Iron Age

5.1.9 Phase 2 comprises the middle to late Iron Age phase of activity and contained 399 identified specimens, of which 95 were identified to species level. Caprines (sheep, *Ovis aries*, and goats, *Capra hircus*) were the most frequently occurring sub-family, with 34 securely identified specimens. A further two specimens were identified as cf. caprine and five as specifically sheep. A total of 23 domestic cattle (*Bos taurus taurus*) specimens were present (and three cf. cattle) and 21 pig (and three cf. pig), meaning that these two species were roughly equal second most common in the assemblage. A true assessment of this relationship is difficult to be certain of – far more 'large mammal' specimens were recovered than 'medium mammal' and it may be supposed that the medium mammal specimens were mostly caprine and pig, whereas the large mammal would be almost all cattle. Large mammal bones tend to be recovered more frequently, however, and to be more easily identified to this level due to the greater depth of cortical bone, whilst pig bones are generally thought to be more subject to destructive taphonomic processes than those of the other domesticates, due to their greater porosity. Of those identified here, 3 of the 21 specimens were of condition 4 or 5, a proportion in line with the assemblage as a whole (Fig. 35).

5.1.10 Loose teeth were the most common element found of all the domesticates but this is true of caprines in particular, where this was true of 25 of the 37 specimens. Four of the pig specimens provided ageing data through epiphyseal fusion and all these elements had at least one end unfused. Combining this data with tooth eruption data of two further specimens suggests that the animals were being slaughtered at between 12 and 18 months of age, consistent with them reaching their optimal size. By contrast, most of the cattle and caprine specimens which produced any information on age at death showed them surviving into adulthood (an unfused proximal cattle

radius and an unfused distal caprine metapodial being the exceptions). One of the cattle specimens had been gnawed by canids (probably dogs, *Canis lupus familiaris*), along with a horse (*Equus caballus*) radius and an indeterminate large mammal fragment.

5.1.11 Three horse specimens were also identified from this phase and a single specimen of water vole (*Arvicola amphibius*) was also dated to this phase, providing evidence for a riverine environment nearby.

5.1.12 An abundance of sheep is characteristic of the late Iron Age in Britain (Albarella 2007) but it is rare to see such a large proportion of pigs (and low proportion of cattle). Dealing with such a small assemblage all interpretations must be treated with extreme caution but one nearby assemblage, from Bagendon, contains proportions of these three species similar to Farm Lane. The two largest assemblages in the region, from Middle Duntisbourne and Duntisbourne Grove, both in fact contain large proportions of both pig and cattle, with no species contributing as much as 40% of the assemblage (Powell 1999), but these were both unusual assemblages, excavated almost entirely from large enclosure ditches.

5.1.13 Excavation Areas 1 and 2 focused on roundhouse enclosure ditches and it is notable that most of the material recovered was from these areas (Area 1 NSP = 234, NISP = 571; Area 2 NSP = 52, NISP = 52). Given the numbers involved there was little to differentiate these areas from the rest of the site and they were also similar to each other. One context that is unusual is a pit fill from Area 1 (fill 1704, pit 1703) that contained a caprine tooth as well as burned and calcined bones, some of which were medium mammal and therefore possibly from the same animal.

Phase 3: Roman

5.1.14 Phase 3 was subdivided into the three subsidiary phases, Phases 3a and 3b, which are discussed separately below, and Phase 3c, which represents the late Roman period and only contains one identified specimen – a domestic cattle tooth. In many ways Phase 3, including the sub-phases, can be characterised by an increase in the proportion of large mammals on the site, principally at the expense of pigs (Fig. 36).

5.1.15 Material only broadly dated to Phase 3 has more horse specimens, proportionally, than the two sub-phases, with a decrease in the proportion of domestic cattle. Most of these horse specimens come from the enclosure ditches in Areas 6 and 8, and the figure includes nine loose teeth from soil spread 6289. This latter figure represents nearly 50% of the total number of horse specimens from the phase and probably inflates it. In other words, the large proportion of horse specimens is probably a result of using NISP figures with a small sample size.

Phase 3a: Early Roman

5.1.16 Large mammals double in proportion of NISP in Phase 3a compared with the ratios in Phase 2, this time at the noticeable expense of pig (Fig. 36). With 164 specimens identified to species, this is the first phase for which firmer interpretations can be made from the zooarchaeological evidence.

5.1.17 Of eight caprine long bone ends recorded from this phase, three were unfused – a proximal 1st phalanx and humerus, and a distal femur. The unfused 1st phalanx shows that young animals were present on the site. Pig bones that provided ageing data were all relatively early fusing ones, so the information provided by this source is limited. Cut marks on a pig scapula probably relate to filleting and a domestic cattle radius has a superficial oblique chop mark to the anterior side of the shaft, resulting in a helical fracture and probably produced by deliberately breaking the bone to access the marrow.

5.1.18 There were up to 74 cattle specimens identified, from at least four individuals. These included 12 specimens with fusion data, of which just one was unfused (a distal right humerus), suggesting that the animals were still generally surviving into adulthood. Skeletal part abundance (for Phase 3 including its sub-phases) suggests that there may be some selection on the site, with fewer lower limb elements present than would be expected if taphonomic agents were the primary selector (Fig. 38; Brain 1981). Given the relative scarcity of these elements, it is possible that they were being disposed of elsewhere, perhaps attached to skins – suggesting that the trading of skins (as leather or for leather production) played a role in the site's economy, perhaps linking the site to the Roman town of Glevum.

5.1.19 As in previous phases, a number of bones showed evidence of having been gnawed by canids, which were also identified among the skeletal remains in the assemblage (Table 18). More unusually though, a cat (cf. *Felis catus*) maxillary molar was identified from this phase. Cat bones occur with far greater frequency in British assemblages from the Roman period but they remain a relatively rare find on rural sites.

Table 18: Percentage of identified specimens gnawed, by phase

Phase	2	3	3a	3b	3c	4	5
% NISP gnawed	4.88	24.24	17.76	17.91	0.00	7.69	25.00

Phase 3b: Middle Roman

5.1.20 Phase 3b is characterised by an increase in the number and proportion of horse and caprine specimens compared to Phase 3a (Fig. 39). Although the MNI (Minimum Number of Individuals) for the horse remains was just two, no clear spatial pattern was observable, with all anatomical parts of the horse occurring across the site. As in earlier periods, all fifteen of the specimens recorded with fusion data were fully fused. Roman period rural sites are noted for having proportions of horse greater than other British site types (Wright *et al*. 2019) and so Farm Lane is not unusual in this regard. Three specimens provided withers heights – all metacarpals. Two provided an estimate of 12.61h (1281mm) and a second was from a slightly smaller individual (11.71h, or 1190mm), both within the normal range for horses of this period in Britain (Johnstone 2004).

5.1.21 A large number of the domestic cattle specimens (38) came from ditch 9180 in Area 6. There was nothing to differentiate this material from the other cattle remains

recovered from this period and in fact the group contained a large number of specimens of all taxa (NSP=401, including 43 other domestic mammal specimens).

5.1.22 This phase has the greatest number of specimens with butchery marks, but at seven specimens this number is still very low. A domestic cattle metatarsal has oblique cutmarks on the mid-shaft, most likely as a result of skinning. Oblique cutmarks were also present on the proximal end of a caprine metacarpal, indicating the same activity, and on the lingual side of a caprine mandible, probably caused by removal of the tongue during butchery. Oblique cutmarks on the cranial side of a pig astragalus were probably also made during primary butchery, as a result of disarticulation, whilst a cutmark on the medial edge of a scapula was most likely produced by filleting and may represent kitchen or table waste. Finally, a medium mammal vertebra was split axially, suggesting that the carcass was hung and split into two halves, a method of butchery generally believed to have been introduced to Britain by the Romans (Seetah 2006).

5.1.23 Epiphyseal fusion again suggests that most domestic cattle on the site survived into adulthood (Fig. 37). Given this similarity to the preceding phase it seems acceptable to combine data with that phase to test the survivability curve provided by epiphyseal fusion with tooth wear data. This suggests that only half of the population survived to the end of their third year, with a peak slaughter age in their fourth year (Fig. 39). The picture is similar when we apply the same analysis to caprines, with around half surviving to the end of their second year and a peak slaughter age in the second year (Fig. 40). Both curves indicate a pastoral strategy focused on meat production, with half the animals (female?) being kept until they had reproduced at least once. The discrepancy between the tooth wear and fusion ageing data is best explained by the relative scarcity of lower limb, early-fusing bones, as discussed previously. This adds support to the suggestion that parts of the animal were being traded off the site – if as skins (whether processed or as raw material) then leaving the heads behind on the site but with the feet attached. In later periods, heads were often left attached to skins in order to identify the type of leather (Serjeantson 1989) but this was not always the case.

5.1.24 Wood mouse (*Apodemus sylvaticus*) was also recorded from this phase and probably represents nearby scrub or woodland. It is joined by field vole (*Microtus agrestis*) as microfauna present in the assemblage from this phase. Also among the wild fauna is a red deer metatarsal (*Cervus elaphus*). It is possible that both red deer and roe deer (*Capreolus capreolus*) were among the material identified among the Phase 3b assemblage but the certain identification here is of some significance as deer remains are rare on Roman sites. A metatarsal could indicate hunting or the importation of skins for processing. Given the likelihood of exporting the raw skins of domestic mammals from the site, discussed above, then this latter possibility appears less likely and hunting the more probable explanation.

Phases 4 and 5: Medieval and post-medieval

5.1.25 Just 32 specimens were identified to species level across these two phases and so contribute little to our knowledge of the site. Caprines and cattle were present in both phases (large mammals were, like caprines, present in each), with pig, horse,

passeriforms and frogs/toads also present in Phase 4. Oven 1585, dated to Phase 4, contained 32 unidentified and large mammal fragments, one of which had been burned.

Conclusions

5.1.26 The proportions of livestock identified from the Iron Age phase on the site likely reflect the local environment, sheep being raised on the nearby Cotswold hills and pigs being kept in patches of woodland nearer to the site. Nevertheless, the relatively high numbers of pig specimens recovered from contemporary sites nearby mean that it is possible they played a larger role in the local Iron Age economy than they did in England generally. From this perspective, it is interesting to note that although skeletal evidence in western Britain is scarce, what little evidence we do have for Wales is beginning to suggest far higher proportions of pig in both prehistory (Madgwick and Mulville 2015) and into the early medieval period (Lane and Redknap 2019). The shift away from pigs, in particular, may represent a decline in local woodland but they remain on the site throughout its occupation and the presence of wood mouse in the Roman period may suggest that this habitat continued to occur locally and may have been a valuable seasonal resource. On the other hand, the presence of field voles in the middle Roman phase suggests that more open environments were also present on or near the site. Given the small number of specimens of both rodents it is impossible to suggest anything more than the existence of the two landscape types on some scale.

5.1.27 From the beginning of the Roman period large mammals came to dominate the assemblage and by the middle Roman phase horses were a large part of the assemblage. In spite of this change, there appears to be some continuity of subsistence strategy, with both domestic cattle and caprines being kept primarily for their meat. This continuity is also apparent on sites to the east of the Cotswolds (Hambleton 2008). By the middle Roman phase, at least, it is also possible to suggest that some parts of the domestic cattle carcases were being disposed of separately, possibly representing a trade in hides or leather.

5.1.28 The presence of cat on the site and the exploitation of deer are both relatively infrequent features of Roman rural sites. Deer bones, in particular, are present on many sites with large assemblages but in very low numbers.

5.2 Charred plant remains *by Sharon Cook*

Introduction

5.2.1 A total of 125 bulk spoil samples were taken during the excavations. After processing and rapid assessment only nine flots, three from the middle Roman period and six from the medieval period, were selected for analysis based on the quality and quantity of the charred plant remains (CPR).

Methodology

5.2.2 The samples were processed using standard water flotation methods with the flot collected on a 0.25mm mesh and the residues on a 0.5mm mesh. The dried flots were sorted using a low-power (x10) binocular microscope to extract cereal grains and chaff,

smaller seeds and other quantifiable remains. Dried residues were routinely sorted to 2mm and a proportion of the <2mm fraction scanned and sorted if appropriate.

5.2.3 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 *et al.* 2006) for identification of wild plant remains, as well as comparison with modern reference material held at OA. Classification and nomenclature of plant material follows Stace (2010).

5.2.4 Quantification of remains was as follows; cereal grains and the seeds of wild plants were only quantified for items of which more than half was observed – this means that cereal and seed counts may be used to reach an MNI (Minimum Number of Individuals). 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 chaff, awns and nutshell fragments the count is for all observed fragments – this means these figures are not suitable for use in calculating MNI.

5.2.5 The identifications of bread wheat (*Triticum aestivum*) and fescues/rye grass (*Festuca*/*Lolium*) have been confirmed by Ruth Pelling (Historic England). Further assistance with the identification of damaged seeds was provided by Denise Druce.

The assemblages

5.2.6 Details of the processed samples and identified material are given in Table 19. Generally, the archaeobotanical remains from across the site are variable both in terms of the quantity and quality of material, with many of the flots containing sparse quantities of poorly preserved remains. In addition, large root mats were present within a number of the flots. The samples selected for further investigation typically contain charred material in much better condition and with larger variety of identifiable plant remains than the remainder of the samples, although the taxa represented are still fairly limited.

5.2.7 The great majority of identifiable cereal grains are wheat (*Triticum* sp.) although a small number of grains in poor condition are possibly barley (*Hordeum* sp.). Where grains have been classified as indeterminate they are largely so badly damaged that the original shape has been lost. Since all the grains that could be firmly identified are wheat it is possible that all of the indeterminate cereal grains are also wheat.

Phase 3b: middle Roman

5.2.8 Three samples came from middle Roman pit fills, with samples 5043 and 5044 being from the basal fill of pit 5579 to the north of Area 5, and sample 6009 the single fill of pit 6410 which was cut through one of the enclosure ditches in Area 6. It had been hypothesised that pit 5579 may contain rake-out material from nearby oven 5560, but there would appear to be no similarity in the contents of the two features since the samples from oven 5560 included charcoal but virtually no other charred plant remains.

5.2.9 The samples from pits 5579 and 6410 contain similar suites of charred remains. Charcoal is common in all the flots but cereal grain with the large oval shape typical of spelt wheat (*Triticum spelta*) forms a much larger proportion of the assemblages from the pits and chaff is very plentiful. Although the majority of testa are missing, there is no evidence of sprouting or spoilage and only a small number of detached coleoptiles are present. Chaff is fairly abundant, including large numbers of glume base fragments which are especially frequent in the samples from pit 5579 and have the appearance of spelt. This confirms the identification of the grain as spelt, although it should be noted that the majority of the glume base fragments are too broken to identify securely and have therefore been quantified separately in Table 19. Detached embryos and coleoptiles are also present, although fairly uncommon.

5.2.10 Seeds from wild plants are dominated, especially in pit 5579, by grass seeds (Poaceae). Other seeds present in smaller quantities appear to be mainly crop contaminants together with occasional plants that have a preference for damp places. The sample from pit 6410 in fact contains very little material apart from the cereal grain and chaff. Again, however, the general condition of the charred plant remains from these features is poor with a clinkered appearance and consequently there are a large number of unquantified fragments.

Phase 4: Medieval

Oven 1585

5.2.11 The remaining samples analysed (123, 124, 136, 137, 138 and 139) originate from the fills of oven 1585 situated to the south of the main enclosure ditches in Area 1. The samples were taken from two fills: 1587 and 1588, with 1588 being the upper fill and 1587 the middle fill. The samples were taken spatially to allow any differences in the composition of the charred plant remains and charcoal within the feature to be identified.

5.2.12 The sample flots from oven 1585 are broadly similar, being composed of large quantities of charcoal, a fairly small quantity of cereal grains, little chaff and very few seeds from wild plants. The lack of chaff and weed seeds may indicate that the crop had been at least partially cleaned before being introduced to the oven, but with such small numbers of cereal remains the original function of the oven is unclear. It seems likely that the grain had either accidentally dropped down into the fire during drying or roasting, or perhaps was an accidental inclusion caught up with other material used for fuel. Hazelnut (*Corylus avellana*) shell fragments are present in small quantities, but again it is unclear if this is a result of deliberate roasting or the use of nutshell, together with wood, as fuel.

5.2.13 The grain from oven 1585 is markedly different from that in other samples from the site. As well as the lack of chaff, the grains have a very compact and rounded appearance usually associated with free-threshing wheats such as bread wheat (*Triticum aestivum*) or rivet wheat (*Triticum turgidum*) which are typical of assemblages dating to the Anglo-Saxon or medieval periods. Unfortunately, however, many of the grains are in poor condition with considerable clinkering and damage to the external surface and in many cases hollowing out of the interior as a result of the

burning process. There is no evidence of sprouting or spoilage although the testa are generally missing and the poor condition of the grains means that details are often obscured by damage.

5.2.14 There are very few seeds from wild plants. Those present are vetches (*Vicia*/*Lathyrus*), docks (*Rumex* sp.) and stinking chamomile (*Anthemis cotula*) with occasional grass seeds, all of which are commonly interpreted as crop contaminants. Two fragments from legumes larger than 5mm are too badly damaged to identify further.

5.2.15 Rare examples of oats (*Avena* sp.) and oat/brome (*Avena*/*Bromus*) are also in poor condition and may also be crop contaminants rather than evidence of oats being grown as a crop. As floret bases are absent it is not possible to confirm if any of the oats are of the domestic, cultivated type (*Avena sativa*).

Discussion

5.2.16 It would seem likely that during the later Iron Age the site was fairly small and as such the lack of charred material in the majority of the samples that were assessed is unsurprising, as small-scale agricultural production and consumption is unlikely to create a large volume of either waste material or accidentally charred material. It is worth noting, however, that only a single sample from this phase contains any chaff. Samples from Iron Age sites often include cereal chaff as a result of the piecemeal parching of glume wheats emmer (*Triticum dicoccum*) and spelt (*T. spelta*), which were typically stored within the glume to be processed as and when required (Hillman 1981).

5.2.17 During the Iron Age many sites in Gloucestershire appear to have been largely pastoral, and the lack of crop-processing evidence may be an indication that this was the case at Farm Lane, where the community either practised small-scale arable agriculture or importing cleaned grain from other, probably local, farms.

5.2.18 Investigations in the fields to the west of this site (Scales 2008) similarly found very little evidence of glume wheat chaff within the Iron Age samples, although small quantities were present within the majority of Roman dated samples. Since features suitable for sampling were not discovered during evaluation trenching to the east of the site (OA 2019a) it can be suggested that the lack of crop-related material is likely to pertain to the whole of the Iron Age settlement area as currently understood.

5.2.19 During the Roman period the site expanded with the construction of additional enclosures, at least one timber building, an oven and an assortment of pits. There is some evidence of crop processing, with scatterings of grain and chaff, mainly or entirely spelt, in a variety of features, albeit in relatively small quantities, a pattern that is fairly typical of small settlements in the Iron Age and Roman periods.

5.2.20 Archaeobotanical assemblages on British rural sites are typically charred and are often dominated by the by-products of grain de-husking and cleaning, which are deliberately burnt as either fuel or waste (van der Veen 2014). This generally results in assemblages of chaff and weed seeds, with only little grain, a pattern which is not evident within the Iron Age material but can be seen clearly in the majority of the Farm Lane samples from the Roman phases.

5.2.21 While the majority of the assessed samples dated to the Roman period contained little charred material, pits 5579 and 6410 contained fairly abundant cereal grain and chaff, mainly of spelt, although much of the chaff was fragmented. It is unclear whether the fragmentation of the majority of glume bases is the result of damage during processing (threshing, sieving etc.) or during burning, but the quantity of material together with the presence on site of querns and at least one millstone indicate that crop processing was certainly taking place by this time. Spelt was widely cultivated during the Roman period in Britain. The highest frequencies are typically found at complex farmsteads and villages (Lodwick 2017, 17), but at Farm Lane the lack of other cereal types may simply be a reflection of the small number of features that contained significant quantities of cereals as well as high levels of fragmentation and distortion.

5.2.22 The relative lack of wild plant seeds in pit 6410, together with moderate quantities of grain and chaff, may indicate that the material had been at least partially cleaned before being accidentally charred and deposited with other household waste. The much greater quantities of both chaff fragments and uncultivated plant seeds in pit 5579 are, however, suggestive of the destruction of waste from threshing or sieving, but the concentration of charred grass seeds, and relative lack of other wild plant types, may in fact indicate another source for the wild plant seeds.

5.2.23 The presence of large quantities of grass-related material within Roman contexts has been hypothesised in the past to be associated with the burning of heath-grassland vegetation (Stevens 2014), although this has usually been based on samples rich in roots and charred stems, which are not present within the samples from Farm Lane. The possibility that this is the result of land being periodically left fallow for grazing in order to increase fertility of the soil has been suggested (Allen and Lodwick 2017; Savio 2011), a strategy which could include the planting of legumes such as vetches as both nitrogen fixers and for use as cattle fodder, as described by both Cato (Book XXXVII) and Columella (Book II) in their works on agriculture (Ash 1941; Forster and Heffner 1968; Hooper 1935). However, it is not clear whether this method of increasing yields extended as far as the British Isles in the Roman period.

5.2.24 There is evidence during the Roman period in the British Isles for the establishment of hay meadows (Campbell 2017) but these meadows usually include a diverse and diagnostic range of wild plants, which are absent in the Farm Lane samples. In traditional hay meadows the hay is mown before animals are put out to graze (Campbell 2017; Rodwell 1992), so the grass seeds in the Farm Lane samples may derive from hay, perhaps used as tinder or fodder. The fact that the majority of grass seeds are of the fescue/ryegrass (*Festuca*/*Lolium* sp.) genus, which contains a number of species commonly utilised as animal fodder and forms a large constituent of most hay meadows, may be significant in this regard.

5.2.25 An alternative explanation is that previously uncultivated grassland had been brought into use for the cultivation of grain crops during the Roman period. It is generally accepted that during the 2nd and 3rd centuries AD an expansion of arable farming took place into areas previously under-exploited, as evidenced by an increase in weeds associated with low soil fertility such as stinking chamomile (*Anthemis cotula*), which is associated with heavier clayey soils, and medicks and vetches (*Medicago* sp. and

Vicia/*Lathyrus* spp.), which are commonly found on sites with low nitrogen values (Lodwick 2017). Together with this, an increase in plants with a preference for damp conditions such as sedges (*Carex* sp.) and rushes (*Juncus* sp., *Eleocharis* sp.) is also noted (Allen and Lodwick 2017). These seeds are all present within this assemblage, albeit in small quantities, which would indicate the cultivation of heavy, seasonally damp soils.

5.2.26 The remains from oven 1585 are consistent with free-threshing wheat, probably bread wheat (*Triticum aestivum*), which is rarely found in samples pre-dating the Saxon period, with the exception of a few late Roman examples, typically related to military use, where it is thought to have been an import (van der Veen 1988). Occasional examples of bread wheat were found in a late Roman context at Fiddington, Gloucestershire (Hunter 2016), but there is no clear evidence that bread wheat was deliberately cultivated as a crop at this time. It is worth noting, however, that free-threshing cereals are less likely to come into contact with fire than are glume wheats, as parching is not required as part of processing. It is also worth considering that it can be difficult to identify charred wheat grains with certainty because of the wide variation in grain size and shape both within the individual ears and across a crop, as variations in soil conditions can cause differences in growth patterns (Hillman *et al.* 1995) and distortion can occur on charring, especially at higher temperatures (Boardman and Jones 1990). Modern charring experiments have shown that at temperatures higher than 290°C the heated grains of emmer and bread wheat become similar in size and shape, for example (Braadbaart 2004, 153). The grains identified as bread wheat from oven 1585 are well rounded in all directions and have a steep embryo, with no evidence of being held within tight hulls and a single small fragment of chaff was identified as being from a free-threshing rachis node.

Conclusion

5.2.27 It would appear from the scarcity of charred plant remains that this site is likely to have been pastoral in nature during the Iron Age, with some of this grassland being brought into arable cultivation during the Roman period.

5.2.28 The sample from oven 1585 is very different from the other features on site as much of the grain appears to be free-threshing bread wheat, indicating an Anglo-Saxon or medieval date. Archaeobotanical evidence for the cultivation of free-threshing wheat during the Roman period in southern Britain is problematic (Campbell 2017) and small amounts in Roman contexts may be intrusive medieval material, although there are occasions where bread wheat seems to have been cultivated as a minor crop or to have been an import (Campbell 2017; Lodwick 2017). Although minor crops such as pulses, free-threshing wheat and rye are present on some Roman sites in central west and south-west Britain (Lodwick 2017, 17) the proportion of free-threshing wheat is generally very low, particularly on rural sites. Free-threshing wheat is, however, the most common grain observed in Anglo-Saxon archaeobotanical assemblages (McKerracher 2018). Glume wheats including spelt and emmer become increasingly rare after about the 7th century, at which time free-threshing varieties become dominant (ibid).

Table 19: Summary of charred plant remains

Feature type		**Pit**		**Pit**	**Oven**					
Feature no.		**5579**		**6410**	**1585**					
Context no.		**5580**		**6411**	**1587**	**1587**	**1588**	**1587**	**1588**	**1587**
Sample no.		**5043**	**5044**	**6009**	**123**	**124**	**136**	**137**	**138**	**139**
Phase		**3b**	**3b**	**3b**	**4**	**4**	**4**	**4**	**4**	**4**
Date		**MR**	**MR**	**MR**	**Medieval**	**Medieval**	**Medieval**	**Medieval**	**Medieval**	**Medieval**
Volume (L)		**40**	**32**	**20**	**30**	**14**	**7**	**8**	**20**	**10**
Flot volume (ml)		**24**	**50**	**20**	**300**	**200**	**50**	**100**	**300**	**800**
Flot sorted		**100%**	**100%**	**100%**	**50%**	**50%**	**100%**	**100%**	**100%**	**25%**
Cereal grain										
Triticum sp.	free-threshing wheat				26	54	14	22	12	64
Triticum spelta L.	spelt wheat	58	29	2						
Triticum sp.	wheat									4
cf Triticum sp.	possible wheat	59	4	3	14	16	9	15	6	11
cf Hordeum sp.	possible barley	2		1						
Avena sp.	oat				1	2				
Avena/Bromus	oat/brome	1	15	1	4	9	3	5	1	2
Cerealia	indet cereal	160#	2#	14#	44#	51#	1#	47#	11#	31#
Chaff										
Triticum spelta L.	spelt glume base	127	466	20						
Triticum dicoccum/spelta	emmer/spelt glume base fragments	5000+	5000+	329						
Triticum aestivum L.	rachis node					1f				
Triticum sp.	rachis internode	1f				1f				
Triticum sp.	scutellum					1				
Triticum sp.	detached embryos	13	4	2		1				
Avena sp.	oat awns	**	*	*						
Cerealia	detached embryos	10	5							
Cerealia	coleoptile	5 + 8f	9 + 9f			1				

Feature type		Pit		Pit	Oven					
Feature no.		5579		6410	1585					
Context no.		5580		6411	1587	1587	1588	1587	1588	1587
Sample no.		5043	5044	6009	123	124	136	137	138	139
Phase		3b	3b	3b	4	4	4	4	4	4
Date		MR	MR	MR	Medieval	Medieval	Medieval	Medieval	Medieval	Medieval
Volume (L)		40	32	20	30	14	7	8	20	10
Flot volume (ml)		24	50	20	300	200	50	100	300	800
Flot sorted		100%	100%	100%	50%	50%	100%	100%	100%	25%
Nuts, fruit etc										
Corylus avellana L.	hazelnut shell				1f	2f				1f
Legume	>5mm	1 + 2f			2f					
Wild plants										
cf Lotus corniculatus L.	common bird's-foot-trefoil		1f							
Vicia/Lathyrus sp. *>2 mm*	vetch/vetchling/tare, etc	1 + 3(1/2) + 1f	1(1/2)	1(1/2)	4 + 11(1/2) + 4f	4 + 1(1/2) + 4f	1(1/2)	7(1/2) + 1f	1 + 2(1/2)	5 + 4(1/2) + 3f
Vicia/Lathyrus sp. *<2 mm*	vetch/vetchling/tare, etc	2f	1(1/2)	1	1 + 8(1/2) + 5f	1 + 5(1/2) + 1f	1 + 5(1/2) + 1f	1(1/2) + 1f		2 + 5(1/2) + 3f
Medicago sp.	medick	2								1
cf Linum sp.	flax									1f
Rumex sp.	dock	5	21				1	3		2f
Rumex acetosella L.	sheep's sorrell	2								
cf Rumex sp.	dock									1f
Chenopodium sp.	goosefoots	1	1							
Galium aparine L.	cleavers	1								
Asteraceae	daisy family									1f
Centaurea sp.	knapweed	1			1					
Anthemis cotula L.	stinking chamomile				1	1	1			

Feature type		**Pit**		**Pit**	**Oven**					
Feature no.		**5579**		**6410**	**1585**					
Context no.		**5580**		**6411**	**1587**	**1587**	**1588**	**1587**	**1588**	**1587**
Sample no.		**5043**	**5044**	**6009**	**123**	**124**	**136**	**137**	**138**	**139**
Phase		**3b**	**3b**	**3b**	**4**	**4**	**4**	**4**	**4**	**4**
Date		**MR**	**MR**	**MR**	**Medieval**	**Medieval**	**Medieval**	**Medieval**	**Medieval**	**Medieval**
Volume (L)		**40**	**32**	**20**	**30**	**14**	**7**	**8**	**20**	**10**
Flot volume (ml)		**24**	**50**	**20**	**300**	**200**	**50**	**100**	**300**	**800**
Flot sorted		**100%**	**100%**	**100%**	**50%**	**50%**	**100%**	**100%**	**100%**	**25%**
Apiaceae	carrot family						1			
Juncus sp.	rushes	1					1			
Eleocharis sp.	spikerushes	1	1							
Carex sp.	sedges			2						
Poaceae	grass seeds (various)	17	16	9f	1f	4f		7	1	2
Festuca/Lolium sp.	fescue/ryegrass	202 + 143f	653+ 184f							
Other										
Indet.	seed/fruit	5#	8#	2#	1#	2#	1#	1#	1#	
Key: # item is very damaged f = fragment only * fragments rare ** fragments occasional *** fragments common (1/2) half only present										

5.3 Charcoal *by Julia Meen*

5.3.1 All of the 125 bulk sediment samples processed for the recovery of charred plant remains were also assessed for their charcoal content (Hunter 2018). This assessment identified 22 samples that were potentially worthwhile analysing further, based on their abundance and whether they were associated with significant features. These included six samples recovered from medieval oven 1585 and seven samples from middle Roman oven 5560. The remaining samples date to the Iron Age or Roman periods.

5.3.2 The aim of further analysis was to identify an optimum number of 100 charcoal fragments from each of the selected samples in order to reliably characterise the range and relative abundance of wood taxa. However, in several cases, less than 100 pieces were available, and for these samples all potentially identifiable fragments were examined. Identifications were made on the basis of diagnostic anatomical characteristics and with the aid of keys in Hather (2016) and Schweingruber (1990). Each selected piece of charcoal was fractured and examined on the transverse, radial and tangential sections as necessary at up to x400 magnification using a Brunel Metallurgical microscope. Tree species nomenclature follows Stace (2010). The results are shown in Table 20 and illustrated in Figures 41–44.

Phase 2: Middle to late Iron Age

5.3.3 Three samples associated with the middle to late Iron Age activity in Area 1 were analysed (Fig. 41). The first came from posthole 1008, one of four forming a four-post structure interpreted as a granary, although little cereal grain was recovered (Hunter 2018). The second is from pit 1703, located within the sub-rectangular enclosure that lies to the south of roundhouse 9117. The final Iron Age sample is from the ring gully of roundhouse 9117 itself. All three produced mixed charcoal assemblages, but all contained a similar range of taxa and in comparable proportions. Oak (*Quercus* sp.) forms a significant part of all three, with most of the remainder consisting of blackthorn/cherry (*Prunus* sp.) and Maloideae type. The Maloideae are a group of closely related taxa in the Rosaceae family which includes hawthorn (*Crataegus* sp.), apple (*Malus* sp.) and whitebeam (*Sorbus* sp.), and which are difficult to distinguish using anatomical characteristics. Other taxa include holly (*Ilex aquifolium*), field maple (*Acer campestre*) and ash (*Fraxinus excelsior*), but none of these form more than a small fraction of the total. The mixed nature of the charcoal from posthole 1008 demonstrates that it does not, at least solely, derive from the remains of the post itself. It is more likely that all three charcoal deposits represent dumps of domestic fuel, collected from consistent sources of wood.

Phase 3: Roman

5.3.4 Oven 5560 is dated to the middle Roman period (Phase 3b). The oven contained two main fills: a charcoal-rich lower fill (5562) which is assumed to contain burnt material from the final firing of the oven, and an upper fill (5561) thought to have accumulated gradually after the oven had gone out of use. No trace remained of the superstructure of the oven. The chamber of the oven was excavated and sampled in quadrants, so

there were four samples from each of the two main fills. Assessment of these samples showed that while those from fill 5562 had good preservation of charcoal, little charcoal was present in the overlying 5561, and so this latter group of samples has been excluded from further analysis.

5.3.5 Analysis of the charcoals from fill 5562 indicates that there is some spatial variation in the prevalence of different wood taxa (Fig. 42). Sample 5042, which was taken from the back half of the oven, consists of over 70% hawthorn-type charcoal, the remainder mostly composed of blackthorn (*Prunus spinosa*) or blackthorn/cherry. The two samples from the front of the oven (5038 and 5040), while not differing significantly from each other in the wood types present or their relative abundance, are clearly different from the assemblage in sample 5042. In each, hawthorn-type makes up 30–40% of the assemblage, with almost a half of each assemblage composed of blackthorn or blackthorn/cherry and field maple making up around 20%. Oak was identified only in sample 5040.

5.3.6 In addition to the oven, two other features of Roman date were analysed: ditch 9128, which forms part of the Phase 3b (mid-Roman) rectilinear enclosure in Area 1, and pit 5003 in Area 5, from which both the upper and lower charcoal-rich fills were sampled (Fig. 43). As there was no sign of *in situ* burning, charcoal in the pit appears to be a secondary dump. The main, lower fill (5005) is strongly dominated by oak, indicating that the dumped material is fuelwood where this single taxon was predominately used. In contrast, overlying fill 5006 is much more mixed, both in the nature of the sediment and in the charcoal composition, with field maple especially abundant. This suggests that the deposit may have derived from more than one source, perhaps a mix of naturally accumulating material and material deliberately dumped into the pit.

5.3.7 Although charcoal was scarce in the sample from ditch 9128, and a limited number of fragments could be identified, it appears to be quite distinct from that in the pit, in that it is strongly dominated by blackthorn/cherry, with almost no oak identified.

Phase 4: Medieval

5.3.8 Oven 1585 lies close to the corner of the Roman rectilinear enclosure in Area 1. Medieval pottery was recovered from the oven, as was free-threshing wheat, one of the staple crops of the medieval period (Cook, above). It is likely therefore that the oven is associated with the medieval settlement located just to the north of the excavated area. The main, charcoal-rich fill (1587) is thought to represent the last firing of the oven, while upper fill 1588 is mostly composed of debris from the demolition of the structure. The central chamber was excavated in quadrants, with four samples recovered from each fill. Assessment showed that the upper fill contained a moderate amount of charcoal, but as the deposit is likely to be of mixed origin, the charcoal recovered from it has not been analysed further.

5.3.9 Charcoal was concentrated in two quadrants of fill 1587, and therefore samples from these areas were fully analysed. This revealed a consistent pattern, with *c* 60% of the charcoal in both locations consisting of oak (Fig. 44). Much of the remaining charcoal was of hawthorn-type, with smaller quantities of field maple and rare blackthorn/cherry and willow/poplar (*Salix*/*Populus*).

Discussion

5.3.10 Analysis of the charcoal has not demonstrated a significant difference in the range of wood species found at the site from the middle to late Iron Age compared to those recovered from Roman features. The species most commonly identified belonged to the hawthorn (Maloideae) group as well as oak and blackthorn/cherry (*Prunus* sp.). While blackthorn (*P. spinosa*) was positively identified only from Roman oven 5560, its presence amongst *Prunus* identifications from earlier features cannot be ruled out. Ash and holly were found only in samples of Iron Age date, and then occurred only rarely. Hazel, again only identified in oven 5560, occurred only once per quadrant. The variations in these scarce taxa may therefore not be significant. Field maple is, however, much more common in the Roman samples.

5.3.11 There appears to be a distinction between the fuels used in the two ovens. While Roman oven 5560 utilised wood from trees that tend to grow in secondary woodland or hedgerows (hawthorn, blackthorn, field maple and hazel) and very little oak, approximately two-thirds of the charcoal examined from medieval oven 1585 was oak. Many of the oak fragments in oven 1585 showed development of heartwood, identified from tyloses formed in the xylem vessels which, as heartwood develops only in mature trees, suggests that wood was being collected from established oaks. Some of the fragments from the second most common taxa group in oven 1585, that of the Maloideae, are in contrast clearly from roundwood. Smaller branches and twigs, having a larger surface area, burn more rapidly and can be used to quickly raise the temperature of a fire, in contrast to larger branches and trunkwood, which produce a more sustained, consistent heat (Gale 2003, 36). The use of both hawthorn-type roundwood and oak heartwood to fuel the oven may therefore reflect the division between kindling and the main fuel.

5.3.12 The fact that charcoal from Roman pit 5003 was almost exclusively a single wood taxon, oak, while the charcoal from contemporary oven 5560 included oak only as a very minor component, would support the view that there was deliberate selection of certain wood taxa for different purposes during the Roman period. However, without closer dating of these contexts it is difficult to be sure to what extent availability of, or in the composition of, local woodland contributed to these choices.

5.3.13 The site lies at the foot of Leckhampton Hill, which is part of the Cotswolds uplands. Today the Cotswolds are predominately open grassland, with around 10% woodland; it owes these characteristics to its extensive use as sheep pasture in the medieval period, when it became an important area for wool production. However, evidence from Anglo-Saxon charters and from early place names suggests that before its clearance, the Cotswolds were heavily wooded, with the name 'wold' possibly deriving from the Old English 'wald,' meaning woodland (Hooke 1978). The woodland that survives today is almost 50% 'ancient' woodland, much of which is beech woodland; ash and oak dominated woodlands also cover large areas (Cotswolds Conservation Board 2020).

5.3.14 While it is therefore likely that the site at Farm Lane had ready access to local wood resources in the Anglo-Saxon period, and most likely in earlier periods, pollen evidence

suggests that much of the wider area, away from the Cotswolds, was cleared at a much earlier date (Rutherford 2019a; 2019b). At both Hunts Grove, Quedgeley, *c* 12km to the south-west of Farm Lane, and at Innsworth 6km to the west, pollen samples point to an open landscape of meadow or pastureland, with low levels of arboreal pollen indicating that woodland was at some distance from these sites as early as the middle Iron Age (ibid.). The woods of the Cotswolds are a strong candidate for the source of this arboreal pollen.

Table 20: Results of the charcoal analysis

		Area 1						Area 4		Area 5		
	Feature type	**Ring gully**	**Pit**	**Posthole**	**Oven**		**Ditch**	**Pit**		**Oven**		
	Feature no.	**9117**	**1703**	**1008**	**1585**		**9128**	**5003**		**5560**		
	Context no.	**1498**	**1704**	**1009**	**1587**		**1028**	**5005**	**5006**	**5562**		
	Sample no.	**152**	**149**	**135**	**123**	**139**	**147**	**5000**	**5001**	**5038**	**5040**	**5042**
	Phase	**2**	**2**	**2**	**4**	**4**	**3b**	**3**	**3**	**3b**	**3b**	**3b**
	Date	**M-LIA**	**M-LIA**	**M-LIA**	**Med**	**Med**	**Mid Roman**	**Roman**	**Roman**	**Mid Roman**	**Mid Roman**	**Mid Roman**
Maloideae	hawthorn/apple/whitebeam	11	7	5	26 (r)	31 (r)	1	6	1	28 (r)	27 (r)	71 (r)
cf Maloideae	cf hawthorn/apple/whitebeam			4	1 r	3					1	
Prunus spinosa L.	blackthorn									4	10 (r)	15 (r)
Prunus cf *spinosa* L.	cf blackthorn									1	8 (r)	
Prunus sp.	blackthorn/cherry	1	3	11 (r)		1	23		2	16 (r)	27 (r)	10
cf *Prunus* sp.	cf blackthorn/cherry		1	1		1	4 (r)			2 r	1	
Prunus/Maloideae	blackthorn/cherry/hawthorn type			2			1			1	3 (r)	
Quercus sp.	oak	10	33	21 (h)	57 (h)	59 (h,r)	1	94 (h)	21 (h)		5 (r)	
cf *Quercus* sp.	cf oak				6 (h)							
Corylus avellana L.	hazel									1	1 r	1
cf *Corylus avellana* L.	cf hazel						1					
Acer campestre L.	field maple	1		1	6	4 (r)			23	17 (r)	12 (r)	3 (r)
cf *Acer campestre* L.	cf field maple	1			1				1		1	
Fraxinus excelsior L.	ash		1	1								
Ilex aquifolium L.	holly		1									
Salix/Populus	willow/poplar				1							
diffuse porous		1	2 (r)	4		1 r	6 (r)				3	
indet			2		2		3		3 (r)	1	1 r	
Total		25	50	50	100	100	40	100	51	71	100	100

h = heartwood, r = roundwood

5.4 Fish bones *by Rebecca Nicholson*

5.4.1 Three fragments from sieved soil samples were identified as fish, but of these two were fossil, including a shark tooth. A tiny fin ray and an indeterminate scrap of fish bone or scale came from posthole 1016 of late Iron Age four-post structure 9197.

5.5 Marine shell *by Rebecca Nicholson*

5.5.1 A tiny quantity of shell was recovered from the excavations, only 2g in total. Phase 3a ditch 9174 included a fragment of clam shell while tiny indeterminate scraps of shell were recovered from Phase 3a ditch 9156 and Phase 2 pit 1670. Since mammal and bird bone was present at the site, albeit in fairly small quantities, the absence of shells, particularly oyster (*Ostrea edulis*), which has relatively robust valves, suggests that.

5.6 Radiocarbon dating *by Andrew Simmonds*

5.6.1 Five samples were submitted to the Scottish Universities Environmental Research Centre (SUERC) AMS Facility, Glasgow for radiocarbon dating. The dating strategy was focussed on establishing the date of the earliest phase of the Iron Age enclosure in Area 1 and clarifying the sequence and chronology for the funerary use of the Roman enclosure in Area 2. The samples comprised diffuse roundwood charcoal from ring gully 9117 and from posthole 1546 within it, samples from the left femoral shafts of skeletons 2112 (which was situated within the enclosure and comprised an intrinsically interesting burial, crouched and accompanied by a brooch and a nailed box or casket) and 2005 (buried immediately outside the enclosure), and a skull fragment from cremation burial 2024 (which was cut into the fill of the enclosure ditch). Unfortunately the sample from skeleton 2005 failed due to insufficient carbon, but the results of the successful samples are presented in Table 21.

5.6.2 The calibrated age ranges were determined using the University of Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.3.2 and the IntCal13 curve. They are cited in the text of this report at the 95% confidence level (2 sigma) and have been rounded out to the nearest five years following Mook (1986, 799).

Table 21: Radiocarbon dates

Lab. ID	Context	Feature	Material	$\delta^{13}C$ (0/00)	Radiocarbon age (BP)	Calibrated date (95.4% confidence)
SUERC-87390	2024	Cremation deposit 2024	Cranial vault	-19.2	1968 ± 30	50 cal BC–cal AD 90
SUERC-87391	2112	Grave 2111	Left femoral shaft	-20.7	1757 ± 30	Cal AD 170–190 Cal AD 210–390
SUERC-87392	1498	Ring gully 9117	Charcoal: cf Maloideae Roundwood	-25.2	2178 ± 30	370–160 cal BC
SUERC-87393	1545	Posthole 1546	Charcoal: Prunus Sp	-25.3	2098 ± 30	200–40 cal BC

6 DISCUSSION

6.1 Before the Iron Age

6.1.1 The excavation uncovered part of a landscape that was intensively occupied by a farming community from the later Iron Age until the end of the 2nd century AD. This forms part of an emerging pattern of evidence for settlement on the clays of the valley floor (eg Coleman *et al*. 2006) that serves as a counterbalance to the traditional belief that occupation during this period was concentrated on the lighter, drier soils of the gravel fans.

6.1.2 Activity before the Iron Age was represented predominantly by a small number of struck flints that were recovered from residual contexts in later features. The earliest was a single microlith of Mesolithic date but most could only be attributed broadly to a wide time-span encompassing the Neolithic period and Bronze Age. This paucity of material is typical of the numerous investigations that have taken place between Leckhampton and Shurdington, where early prehistoric finds are restricted to occasional finds of worked flint from the evaluation trenching at Brizen Farm and the Cotswold Archaeology evaluation to the north. Of more interest was a small flint scatter (1145), revealed in the eastern part of Area 1. The scatter consisted of only 27 flints and the varied condition suggests that some of this material was residual, but most appear to derive from a single depositional event. The non-residual material was dominated by flakes, and a date during the late Neolithic period or early Bronze Age is indicated by a backed knife, while a less diagnostic second knife was also present. It is possible that early prehistoric activity in the valley was largely concentrated on the gravel islands and represents short-term, task-specific visits by populations more permanently resident on the Cotswolds.

6.2 The middle to late Iron Age settlement

6.2.1 Iron Age activity comprised a small enclosed settlement in Area 1 and activity in Areas 2 and 5 that was more difficult to define and could be either domestic in character or represent livestock pens, as well as a possible boundary ditch in Area 6 (Fig. 7). These features formed part of an agricultural landscape that extended beyond the limits of the site, including ditches that have been recorded by the evaluation trenching at Brizen Farm and a possible ditched enclosure at the proposed Secondary School site to the east of Farm Lane (OA 2008; 2012). Defining the chronology of the Iron Age phase of the settlement is hampered by the reliance on ceramic dating evidence for most of the features, since the fabrics that dominate the period in the Severn Valley, particularly Malvernian wares, have a wide date range that extends from *c* 200 BC into the Roman period. Occupation of the Area 1 enclosure can perhaps be bracketed by the radiocarbon dates of 370–160 cal BC and 200–40 cal BC associated with the central roundhouse, which suggest that habitation had begun by the early 2nd century BC if not a little earlier, and the early Roman pottery from the upper fills of the enclosure ditch, which evidently continued in use for some period after the conquest until it was replaced by the Phase 3a enclosure. The activity in the other excavation areas was dated only by pottery, and its chronological relationship to the enclosure is uncertain;

it is possible that the two were contemporary and formed integrated elements of a single extensive settlement, or that they were separate entities and perhaps sequential, or that they overlapped but one (most likely the enclosure) continued in use after the other had been abandoned.

6.2.2 The apparently triangular form of the enclosure is rather unusual, since Moore's (2006, 45–75) survey of settlement morphology in the Severn-Cotswold region indicated that enclosures in the valley are almost exclusively sub-rectangular, whereas a greater range of shapes is present on the Cotswolds and in the Upper Thames Valley. Morphology notwithstanding, there is no doubt regarding its domestic function, which is demonstrated by the presence of typical components of contemporary settlements, including at least one roundhouse, a four-post structure and structural fired clay probably from ovens, as well as domestic refuse comprising pottery and butchered animal bone. Open settlement, such as that in Areas 2 and 5, is less visible to archaeological survey techniques but certainly formed an element of the landscape of the Severn Valley, and examples have been identified near Gloucester at Roman Fields-Abbeymead and Saintbridge (Atkin and Garrod 1987). The combination of enclosure and areas of open occupation within a single settlement has been noted at Elm Farm on the Wormington to Tirley Pipeline (Coleman *et al*. 2006, 90), as well as at Beckford II and Evesham in Worcestershire (Moore 2009, 91; Edwards and Hurst 2000), and may be more common than is generally appreciated.

6.2.3 A survey of Iron Age enclosure boundaries in the East Midlands concluded that it was quite common for settlements to fluctuate between enclosed and unenclosed forms over time (Rees 2008), but it is uncertain how common this was in the Severn Valley area. At Farm Lane the Area 1 enclosure provided most of the artefactual evidence and all the environmental evidence for this period, the other features being shallow and plough-truncated. Despite the relatively unexceptional appearance of the settlement, the metalwork assemblage contained items that might hint at a higher status, including a very rare silver coin of the Dobunnic ruler Eisu and a La Tène III type brooch, albeit both were residual in Roman features. The context of the coin is consistent with the pattern of stratified Iron Age coins from the region almost invariably occurring in Roman layers rather than in pre-conquest deposits, even on sites where Iron Age activity is present, although the significance of this is uncertain (Moore 2006, 2000–3).

6.2.4 The settlement was undoubtedly agricultural in character, although no plant remains survived from this phase. The only evidence found for crop processing was a sandstone saddle quern of probable Iron Age date found in a Roman ditch. Nevertheless, it must be assumed that the population had access to a range of plant foodstuffs in order to maintain a healthy level of nutrition, and that they either grew crops that for some reason did not enter the archaeological record, or obtained them from settlements elsewhere through the exchange and social systems into which the community was doubtless integrated. A predominantly pastoral strategy would be appropriate to the soils on the clay parts of the vale, which are heavy and prone to waterlogging and flooding during the winter months but provide good pasture; the site was situated between two watercourses, the Ham Brook and Hatherley Brook, which drained off

the Cotswold escarpment and would have ensured that the grassland was well watered. The faunal remains indicate that sheep/goats and cattle grazed on these pastures, along with a few horses. Sheep/goat were the most numerous species recovered but due the small size of the assemblage the significance that can be attached to this is limited. In any case, cattle would have provided a larger proportion of the diet due to their greater size, since Iron Age cattle weighed up to 410kg whereas a sheep only weighed about 57kg (Cunliffe 1991, 380). A corollary of this is the greater input of resources required by cattle, since each individual would have had a food requirement at least four times that of a sheep/goat, in addition to being longer-lived (Lambrick 2009, 246). Consequently, even if the greater proportion of sheep/goats in the assemblage is an accurate reflection of the Iron Age livestock, a significantly larger area of the community's pasture land would have been grazed by cattle than by sheep/goats. There was also a surprisingly large number of pigs at Farm Lane, amounting to 25% of the assemblage. Pigs typically occur as only a small proportion of the livestock on Iron Age settlements, but at the sites at Middle Duntisbourne and Duntisbourne Grove large proportions of pig bones were associated with molluscan evidence for woodland in close proximity (Mudd and Lupton 1999, 86; Mudd and Lawrence 1999, 97), so it is possible that the community at Farm Lane was similarly exploiting the opportunity for pannage provided by any nearby woodland.

6.3 Expansion of the settlement during the Roman period

6.3.1 As noted above, the Iron Age enclosure in Area 1 continued in use into the early part of the Roman period, although for precisely how long is uncertain. Indeed, dating the transition from the Iron Age landscape to the Roman arrangement that replaced it is by no means straightforward. Although there is no reason to believe that there was a hiatus in occupation, none of the Roman wares demonstrably pre-dated the Flavian period and it is therefore possible that several decades passed after the conquest before Romanised pottery penetrated this rural area of the valley. More probably, native wares continued alongside Roman coarsewares that lacked diagnostic traits. This period would have coincided with the currency of the copy of an *as* of Claudius and the possible second example, recovered respectively from a 2nd century pit and from the subsoil. When change eventually came, it entailed a wholesale reorganisation of the landscape and a concomitant reorientation of the community's agricultural regime.

6.3.2 This reorganisation encompassed the entire site, with the exception of Area 10 and the smaller Area 9, and entailed the enclosure of much of the landscape, presumably to enable more intensive agricultural exploitation by allowing more carefully controlled management of the enclosed land (Fig. 8). These areas of enclosure can be defined as two main complexes, the northern complex comprising Areas 3 and 4 and continuing into the adjacent fields to the west where further boundaries were recorded in the Brizen Farm evaluation (OA 2008), and the southern complex extended across Areas 5–8. Both complexes appear to have originated, perhaps as a single design, during Phase 3a, although recutting of the boundary ditches during Phase 3b had removed much of the evidence for the original features. The reworking of the boundaries during Phase 3b mostly comprised maintenance rather than

reorganisation, and the original layout remained virtually unchanged until the site was abandoned at the end of the 2nd century. The new arrangement preserved some elements of the earlier landscape, however. Area 1 remained the location of a discrete enclosure, albeit of more rectilinear form than its Iron Age predecessor, and the southern enclosure complex incorporated the alignment of an Iron Age boundary ditch as its eastern limit.

6.3.3 The south-eastern corner of the northern complex was exposed in Area 4, along with a ditch in Area 3 that probably formed part of its eastern limit. The part of the complex in Area 4 included three smaller subsidiary enclosures that produced no evidence for domestic occupation and may have been animal pens or storage areas, to the north of which was a group of features including a post-built building (5617), an oven (5560) and several pits. The southern complex extended over an area of 190 x 135m, its perimeter enclosed by a substantial boundary ditch with internal ditches forming regular subdivisions. The north end of the western perimeter ditch terminated within Area 5 and it is uncertain whether the complex had ever been fully enclosed to the north-west or whether it simply respected the northern complex. The southern part of the complex was divided into a pair of sub-square enclosures that each measured *c* 60m across, and the south-western enclosure was further subdivided by curved boundaries that demarcated its western part. Adjoining the north side of these two enclosures was a central area that measured 85m from north to south with no apparent subdivision, the only features within it being a group of curvilinear and (mostly) rectilinear gullies near the western boundary that were not well understood due to their incomplete and truncated condition but are likely to represent small enclosures. The only part of the northern boundary that was exposed was a curving ditch in Watching Brief Area WB4, which may indicate that the complex ended in a D-shaped enclosure. The overall form of the complex was quite similar to the (rather smaller) south-western part of the settlement at Hucclecote Link Road (Thomas *et al.* 2003, fig. 8).

6.3.4 At the same time, the Iron Age settlement enclosure in Area 1 was replaced by a more rectilinear enclosure. No buildings or other domestic features such as rubbish pits were present, but a large pottery assemblage was recovered from the fills of the enclosure ditch and was clearly domestic in character, including samian ware and other table wares in addition to more utilitarian forms and amphorae which suggest that olive oil was consumed. The absence of identifiable domestic buildings is a common feature of rural settlements of this period and has been attributed to the use of mass-walled or timber-framed building techniques that leave no archaeologically detectable trace (Smith 2016a, 51). A possible secondary function for the enclosure in sheltering livestock may also be suggested due to the unusual arrangement of the south-eastern corner of the enclosure, where the ditch forming the eastern side wrapped around the outside the southern side to create a narrow passage through which the enclosure may have been accessed. This is reminiscent of enclosure E98 at Gill Mill Quarry, Oxfordshire, which it was interpreted as being designed to facilitate the management of livestock moving into and out of the enclosure (Booth and

Simmonds 2018, 765); the sub-enclosures within the Area 1 enclosure may have been used to segregate livestock from areas of domestic occupation.

6.3.5 The enclosure of these substantial areas of the landscape was probably necessitated by a major transformation in the agricultural strategy, in which cattle became more important and arable cultivation was either initiated or increased. The animal bone assemblage from the Roman period is substantially larger than the Iron Age collection, thus providing greater reliability, and indicates that cattle were now certainly the most numerous species, accounting for 43% of the specimens identified to species, and undoubtedly supplying most of the meat consumed at the settlement, and the proportion of horses also increased. What ageing data was present suggested that all species were raised primarily for their meat. The facilities provided by the new enclosure complexes may have been designed largely to accommodate this increased emphasis on larger animals. In addition to the greater food and water intake noted above, cattle and horses require protection from the weather during the winter months, during which time they must also be supplied with fodder as well as being kept contained to avoid damage to domestic habitation and crops. It is therefore likely that many of the enclosures served as stockyards for the community's herds. The enhanced agricultural strategy also entailed an adoption (or increase) of arable cultivation. Charred plant remains were still quite limited, the only substantial assemblages coming from pits 5579 and 6410, in which the cereals entirely comprise spelt wheat. The large proportion of grass seeds in the assemblages may be direct evidence for the ploughing up of former pasture, since it would be expected that grass would recur as a major contaminant within the crop for the first few years of cultivation. The abundance of perennial rye grass in a soil sample at Site II on the Tewkesbury eastern relief road has similarly been interpreted as evidence for cultivation of formerly grazed grasslands (Walker *et al*. 2004, 89–90), and a similar expansion of arable onto former grassland has been proposed as part of the Roman period intensification of Iron Age farming traditions in the area around Gravelly Guy/Stanton Harcourt in the Thames Valley (Booth *et al.* 2007, 284). Processing of crops was also evidenced at Farm Lane by the recovery of five querns, including one definite and one possible millstone. The recovery of querns from various dispersed locations around the southern complex may indicate that small-scale corn-grinding was undertaken at multiple locations within the settlement, unless the place of discard is unrelated to the place of use; there is some evidence from the low mean sherd weight of pottery that refuse may have been middened prior to its eventual deposition. The millstones are likely to derive from human- or animal-powered mills rather than watermills, but nevertheless further demonstrate the investment made in the infrastructure of agricultural production, and perhaps centralization of grain processing at the site of this installation. The reorganization of the landscape represents an investment of resources whose purpose was undoubtedly to bring about a significant increase in agricultural production. This was achieved by a combination of intensification of production, in the form of enclosure and increased management of the landscape, and extensification, exemplified by the possible increase in cattle and horse at the expense of sheep/goats and pigs. This would have required a substantial increase in the land being farmed, since the area used for both arable and

pasture appear to have increased. The copper alloy seal box lid would have protected the seal on a document or bag of valuables and may be evidence for the administration that was required to manage the expanded agricultural establishment during the Roman period (Smith *et al*. 2018a, 70).

6.3.6 Hay meadows would also have been an important element of the landscape, providing winter fodder for the livestock. Little direct evidence for hay was found, unless the charred grass remains in pits 5579 and 6410 represent the burning of hay, although the samples lack the full range of species diagnostic of hay meadows. Contemporary management of hay meadows on a substantial scale has been recognized elsewhere, however, most notably at Claydon Pike/Thornhill Farm in the Upper Thames Valley (Smith 2007b, 382).

6.3.7 The clearest evidence for an area dedicated to agricultural processing and industrial activity was found in the northern complex, and comprised post-built building 5617 and associated features, although the precise character of the activities here was ambiguous. The building is characteristic of a class of structure that is found occasionally on rural settlements, constructed from two parallel rows of postholes supporting a single span roof and thus of limited width, although their lengths vary considerably. The Farm Lane example measured 8 x 2.3m, placing it near the smaller end of the range, and is similar to a six-post building at Gill Mill Quarry that measured 4.8 x 2.2m (Booth and Simmonds 2018, 100) and a rather squarer building at Eton Rowing Lake, Berkshire that measured 6 x 4.5m (Allen and Mitchell 2001, 27). A longer structure measuring 15.3 x 7.7m was also recorded at Gill Mill (Booth and Simmonds 2018, 137–8) and a building of similar size was associated with the villa at Roughground Farm, Lechlade (Allen *et al*. 1993, 110), while a particularly long building at Neigh Bridge, Somerford Keynes, measured 27m (Smith 2007a, 271–2). The paucity of artefactual material from each of these buildings has resulted in most being interpreted as agricultural outbuildings used for storage of crops and/or sheltering livestock. In the case of building 5617, the proximity to oven 5560 and the pits to the north may suggest a functional association, although interpretation of these features is not straightforward. The oven was clearly not intended for crop-drying, since the hard-fired sides indicate that it was heated to a much higher temperature than would be appropriate for that function and the only charred plant remains present comprised charcoal that presumably represented spent fuelwood. The form of the oven would be consistent with a pottery kiln, but the absence of wasters militates against this interpretation, and similarly the absence of slag argues against a function in metalworking. Intriguingly, the building at Eton was also associated with a group of ovens (Allen and Mitchell 2001, 27), but full analysis is still awaited. The stone-based pit 5579 was clearly constructed for a specific function rather than as a normal pit, and bears a similarity to a (much larger) pit associated with the probable malt house at Aylesbury, Buckinghamshire, interpreted as a steeping pit in which grain would be soaked to promote germination as the first stage of producing malt in the brewing process (Wakeham and Bradley 2013). A similar interpretation could be applicable for pit 5579, although no evidence for the charred germinated grain that is the characteristic by-product of the malting process was recovered from Farm Lane and

other processes that involve the use of a tank of water are also possible, such as textile processing. The pit produced an assemblage of charred grain and grass, and although this material may represent debris from elsewhere that was dumped into the pit after its abandonment rather than being associated with the pit's original function, it nevertheless provides evidence for this part of the site being a focus of crop-processing activity, which is also indicated by the two fragments of millstone recovered from pits 5504 and 5564. Domestic refuse recovered from the enclosure ditches in this area may indicate that there was a secondary focus of settlement nearby, perhaps within the unexcavated area in the fields to the west of the site. This included a similar pottery assemblage to that generated by the occupation in Area 1, as well as two finger rings.

6.3.8 The landscape at Farm Lane appears to have comprised a number of distinct elements, including the two enclosure complexes, the enclosure in Area 1 and the boundary and enclosure in Area 2, as well as the possible enclosure and other boundaries identified by trial trenching north of Brizen Lane and at the proposed Secondary School site, and the possible stone-founded building at Brizen Playing Fields (OA 2008; 2019a; Gloucester and District Archaeological Research Group 1996). Whether these various locations formed part of a single establishment cannot be proved, and any tenurial relationships between them are lost, but it is likely that they formed components of an integrated agricultural landscape, their differing forms being indicative of varying roles in pastoral or arable production. This zoning of the landscape may be analogous to the arrangement at Wormington Farm, where cropmark evidence has identified a possible small villa set within an enclosure complex that is linked by a ditched trackway to a small, discrete square enclosure and a second area of settlement at a junction with another trackway (Coleman *et al*. 2006, 29–30). It could be conjectured that the possible presence of a stone building at Brizen Playing Field, as well as an alleged coin hoard, indicates a higher status element here, possibly even a villa, but this is far from certain. Any distinction in form between Brizen Playing Field and the other areas could alternatively be related to chronology, since the dating of the remains there is not well understood, and the coin hoard is said to date from the 4th century.

6.3.9 There is no evidence to indicate that the community at Farm Lane was of distinct status compared to the neighbours on other rural farmsteads in the Severn Valley. The form of the settlement was, as discussed above, entirely typical, and there was certainly no indication of a substantial domestic building, either in the form of structural remains or building material such as masonry, flue tiles or roof tile. Furthermore, the pottery assemblage was characteristic of a low-status rural settlement, consisting mostly of local products of the Severn Valley ware industry, with very few finewares or exotic imports other than samian ware. However, the recovery of a nail cleaner, as well as a number of brooches, finger rings and hairpins, indicates that some element of the population had adopted modes of personal display that probably made them look very different to the majority of the population. The bird-shaped mount, whatever it was fixed to, also suggests a taste for novelty.

The burials

6.3.10 The distribution of burials at Farm Lane was typical of a common practice on Roman rural sites of placing burials in dispersed locations around the settlement area rather than concentrated in a formal cemetery (Pearce 1999; Esmonde Cleary 2000). Also characteristic was their placing within or close to boundary ditches. The burials are a heterogeneous group, comprising one urned and one unurned cremation burial, four crouched burials, two extended burials and one flexed. Four loose teeth that were found close to skeletons 6356 and 6357 but came from neither most likely derive from a disturbed burial in the same ditch.

6.3.11 All the burial rites can be paralleled at other Roman rural settlements, and it is uncertain whether in this instance their varied characters have any chronological significance. The radiocarbon date of 50 cal BC–cal AD 90 for cremation burial 2024 would make it rather earlier than the other burials, but the vessel used as a cinerary urn dated from AD 80–200, suggesting that it in fact dated from the end of the radiocarbon range. The vessel had been inserted into the fills of the Area 2 enclosure ditch, which contained pottery dating from AD 120–150; this apparent contradiction in the dating evidence is not easy to explain, but since it was not certain what level the burial was inserted from it is possible that it was early in the sequence and that the later pottery in the ditch fills derived from continued silting of the ditch after this event. Alternatively, though perhaps less likely, it is possible that the burial represents the remains of an individual who died during the late 1st century and was buried within the ditch during the mid 2nd century; there is plentiful evidence from disarticulated human bone on settlement sites for funerary practices that involved retaining all or part of the remains (Smith 2018, 275–7), and it is only a short step to argue that on occasions cremated bone may have been similarly treated. Apart from the undated cremation burial 2070, the other burials are all likely to date from the 2nd century – skeleton 2112 yielded a radiocarbon determination of cal AD 170–390 and, in common with burials 2004 and 2077, contained residual sherds of 2nd century pottery, while the four burials in the southern part of the site were all inserted into ditches that infilled during this period. Although it might be objected that the hobnailed footwear worn by the individuals in graves 2004 and 2111 are more typically a phenomenon of the late part of the Roman period, the practice started during the 2nd century and so is no impediment to this dating (Philpott 1991, 167). The practice of inhumation was not widespread at this date, cremation being the more common rite found archaeologically, but the Cotswold-Severn area was the location of a localised tradition of inhumation, often crouched as at Farm Lane, that has been interpreted as a continuation of a native Iron Age custom (Heighway 1980, 57). Crouched burials elsewhere in the immediate area include an example of 4th century date at the former St James's Railway Station (Coleman and Watts 2008, 93), and the site at Hucclecote Link Road included a small cemetery of 12 burials, of which nine were crouched and three extended (Thomas *et al*. 2003, 65). Other than footwear in graves 2004 and 2111, the only evidence for grave goods were a hairpin and a possible wooden box buried with the latter individual. The box was represented only by six iron nails and tiny unidentified iron fragments, and is an unusual inclusion, although a more elaborately constructed box or casket, with a drop handle and hinged lid, accompanied one of the burials at Hucclecote (Thomas *et al*. 2003, 65–6).

6.3.12 The tough working lives of these Roman farmers is graphically demonstrated by the evidence from the skeletal remains; although none of the individuals was aged over 35 years, multiple palaeopathologies associated with lifting heavy loads were recorded, including Schmorl's nodes in four of the six adults that may result from continuous stress on the spine, and osteoarthritis that effected the spine and several joints of skeleton 8005; the healed fracture at the proximal end of the left thumb of skeleton 2112 may also have been occupation-related. These findings are consistent with the results of a recent study of rural burials in central, southern and eastern England, which concluded that the peasant population typically exhibited poorer health than either their Iron Age forebears or contemporary individuals from Winchester that were used as a comparative urban population (Rohnbognor 2018, 340–3).

6.3.13 The burials were focussed in two main locations: one of the E–W enclosure ditches in the southern part of the site and the Area 2 enclosure. The enclosure, in particular, revealed an intriguing array of evidence that may suggest that it served a funerary or religious function. No buildings were situated within the enclosure, and in fact most of the area was devoid of archaeological features, but inhumation burials 2111 and 2077 were situated in the south-eastern corner and cremation burial 2024 was inserted into the western side of the enclosure ditch, and grave 2004 and cremation burial 2070 were situated a short distance outside it. In addition to this concentration of burials, the only features identified within the enclosure were three Severn Valley ware vessels that had been deliberately buried upright in shallow pits, one of which was found during the evaluation. The pots did not contain cremation deposits, or any other material, and their purpose in uncertain. Pots set into the ground have been recorded in domestic contexts where they may have been used as storage receptacles, as demonstrated by the Iron Age storage vessel in pit 1483 within the Area 1 enclosure and at the nucleated settlement at Gill Mill Quarry, Oxfordshire, while an example within a forge at Ashford, Kent, may have held water to cool the smith's tools (Booth and Simmonds 2018, 222; Paynter 2008, 277). However, in the absence of evidence for domestic occupation or industrial activity within the enclosure it is possible the vessels at Farm Lane were instead associated with the burials, perhaps serving as cenotaphs or containing offerings associated with the funerary rites; the concept of votive deposition is well established (Smith 2016b, 641–3) and it is possible that the vessels served as containers for some material that has not survived, perhaps buried as part of funerary rites or associated with the commemorative ceremonies that were habitually enacted at the graveside.

6.4 Abandonment of the settlement and limited late Roman activity

6.4.1 The settlement was abandoned by the end of the 2nd century, and there is very little evidence for activity after this during the Roman period. The only later feature was pit 5557, located in Area 4, which contained a small but mixed group of pottery sherds dated after *c* AD 240, and five late 3rd century coins were recovered from superficial deposits, perhaps representing a single episode of activity at this time. Only a single sherd from an Oxford colour-coated mortaria dated to the 4th century, and was recovered from the topsoil. The enclosure and other boundary ditches at the proposed

Secondary School site similarly lacked any material after the 2nd century (OA 2019a), as did the trenches in the fields to the west at the Brizen Farm evaluation, although two ditches in a single trench north of Brizen Lane contained pottery dating after the 2nd century (OA 2008). The abandonment of the features at Farm Lane thus appears to be part of a more widespread phenomenon that affected the whole of the surrounding area. This is an unusually early date for a settlement to end, since settlements in the Severn Valley more typically experienced a decline in the 4th century (Smith 2016c, 148). At the former St James's Railway Station, for example, development of the field system continued into the first half of the 4th century, and two graves were also of 4th century date (Coleman and Watts 2008, 102), while the boundary ditches at West Drive/Wellesley Road continued into at least the 3rd century, with 4th century finds indicating a continued presence in the vicinity (Catchpole 2002, 98). Only limited evidence was found for activity after the end of the 3rd century or the beginning of the 4th at Hucclecote Link Road, however, and the authors attributed this to the development of the nearby villa, with a possible concomitant relocation of population (Thomas *et al*. 2003, 67). It is possible that a similar interpretation is appropriate at Farm Lane if the remains at Brizen Playing Field represent a villa, although the chronology of the site is not currently understood.

6.5 The Farm Lane settlement and the Severn Valley region

6.5.1 Prior to the excavations in advance of construction of the M5, the low-lying landscape of the Severn Valley was believed to have been little settled during the Iron Age and Roman period, particularly away from the gravel fans. Since then, work undertaken in association with development has progressively revealed evidence for a well-populated landscape of small, dispersed agricultural settlements, of which Farm Lane is a typical example. Of particular relevance to Farm Lane due to their similarity and proximity are sites within Cheltenham at West Drive/Wellesley Road (Catchpole 2002) and the former St James's Railway Station (Coleman and Watts 2008), each representing enclosure complexes associated with settlements somewhere nearby, and a pair of farmsteads along the Horsbere Brook near Gloucester, at Hucclecote Link Road and Brockworth (Thomas *et al.* 2003; Rawes 1981), while the Wormington to Tirley Gas Pipeline (Coleman *et al*. 2006) provided a useful transect further up the valley. These and other interventions have demonstrated that although the lighter soils of the gravel fans may have been preferred during the Roman period, particularly by higher-status sites as evidenced by the siting of the villas at Hucclecote, Frocester and Willington Court (Clifford 1933; 1961; Price 2000; Roberts 2009), the clay soils were also well populated.

6.5.2 The historical development of the community at Farm Lane, comprising a later Iron Age farm that continued in occupation after the Roman conquest and subsequently expanded to accommodate the requirements of the Roman economy, is typical of rural settlements in the Severn Valley. Where late Iron Age occupation is identified, continuity at the conquest appears to be the norm, as exemplified by farmsteads at Bishop's Cleeve and Frocester (Holbrook 2006, 109; Price 2000). At Walton Cardiff, near Tewkesbury, settlement appears to have been continuous from the middle Iron Age into the Roman period (Hart and McSloy 2008, 69), and it is possible that a pre-

conquest component was present at Hucclecote Link Road, but this is not capable of proof given the limitations of the ceramic dating evidence (Thomas *et al*. 2003, 63). As discussed above in relation to the ambiguity of the start date of Phase 3a at Farm Lane, identification of the early years of the Roman occupation at rural settlements is problematic, and so the immediate impact of the imposition of Roman rule and the establishment of the fortress at Gloucester in AD 48/9 is hard to assess. What is certain is that the landscape of the valley changed fundamentally during the late 1st century and the early part of the 2nd century, when existing farms were redeveloped and new sites established. This was when the Phase 3a/3b enclosures at Farm Lane were constructed, and similar developments undertaken at the sites mentioned above, while the enclosure systems at West Drive/Wellesley Road and the former St James's Railway Station were first established, as well as the farmstead at Brockworth (Catchpole 2002, 98; Coleman and Watts 2008, 102; Rawes 1981, 53). Expansion was not synchronous at all sites but appears to have occurred piecemeal: for example, at Farm Lane and Brockworth this development is dated to shortly after AD 70, whereas at Walton Cardiff expansion and enclosure did not occur until the early part of the 2nd century. Elsewhere, expansion can often only be dated broadly to the mid/late 1st century (eg the former St James's Railway Station: Coleman and Watts 2008, 102) or to the late 1st/early 2nd century (eg Hucclecote Link Road: Thomas *et al*. 2003, 64; West Drive: Catchpole 2002, 98). In all instances, however, it appears to date from after the abandonment of the fortress and may associated with the colonia that was constructed on the same site, or perhaps more generally with the demands imposed by the Roman economy and the need to supply the urban population and/or the military.

6.5.3 The development of each of these sites during the Roman period was characterized by complexes of conjoined enclosures similar to the arrangement at Farm Lane. The enclosures were often arranged into a single complex, as at Walton Cardiff, Brockworth, and Site II on the Tewkesbury eastern relief road (Hart and McSloy 2008, fig. 7; Rawes 1981, fig. 1; Walker *et al*. 2004, fig. 12). The arrangement of two contemporary complexes at Farm Lane can be paralleled at Hucclecote Link Road (Thomas *et al*. 2003, fig. 8) and the possible villa and associated enclosures at Wormington Farm (Coleman *et al*. 2006, fig. 17). The common factor in all these sites is the construction of a formal arrangement of enclosures, presumably representing zoning of activities such as domestic occupation, stockyards and crop processing and the adoption of a broadly similar strategy to maximise agricultural production.

6.5.4 All the settlements are likely to have adopted a mixed farming regime, although reconstructing the relative importance of livestock and arable is difficult, particularly given the poor preservation of plant remains at several sites (notably West Drive, the former St James's Railway Station, Hucclecote Link Road and Walton Cardiff, although at the latter crop processing was evidenced by the presence of a corndrying oven). As regards the composition of the livestock, cattle were certainly the most numerous species of livestock at the Cheltenham sites at West Drive and the former St James's Railway Station (Baxter 2002; Warman 2008) and also at Hucclecote Link Road (Stickler 2003), and although the number of animal bones from each of these sites was quite

small, cumulatively the evidence for a clear regional preference for cattle is compelling. They also predominated at Walton Cardiff and at Bank Farm and Elm Farm on the Wormington to Tirley Gas Pipeline (Higbee 2004). This contrasts with the dominance of sheep on sites in the Cotswolds (Allen 2017, 91–2), and illustrates how communities sought to best exploit the productive potential of their particular locale. On most sites what ageing data is available indicates that both cattle and sheep/goats were kept primarily for meat and slaughtered once fully grown, although at Hucclecote Link Road and Elm Farm cattle of all ages are present, indicating that some were kept for secondary products such as dairy products and traction, and at Walton Cardiff this pattern was reversed, sheep/goats being kept for both meat and secondary products. The shift to cattle (and horse at Farm Lane) no doubt reflects a change in dietary preferences, but production of these larger animals may also have been a practical response to the increased demand for meat to feed the urban populations of nearby Gloucester and Cirencester, as well as for transport to the garrisons of Wales and the North.

6.6 Medieval occupation and agriculture

6.6.1 There was no evidence for activity during the centuries following the Roman period until an episode of land use during the mid 11th to mid 13th centuries (Fig. 9). These features are likely to represent peripheral activity associated with the establishment of Brizen Farm a short distance to the north. The current farm building is of 16th century origin, but evaluation trenching has uncovered evidence for a medieval precursor in the form of a 12th century ditch and a wall, demolition layer and further ditches of 13th century date (OA 2008). The features at Farm Lane are exclusively agricultural in character, comprising the ditched boundaries of fields or other enclosures in Area 1 and 4 and part of an enclosure in Area 2 that may have been a pen for livestock, while oven 1585 in Area 1 provided evidence for processing of free-threshing wheats such as bread wheat and rivet wheat rather than the spelt that had been the staple of the Roman period. A spindle whorl that was recovered from the subsoil in Area 5 was of a form that may also indicate a medieval date.

6.6.2 Areas of arable cultivation were indicated by furrows, which were largely restricted to Areas 4 and 5 in the western part of the site and correspond in location and alignment with Moore-Scott's (1999, fig. 3) reconstruction of ridge and furrow earthworks identifiable in the parish in the mid 1900s. It is notable that there appears to be no correlation between the alignments of the Roman and medieval features – the medieval boundary ditches in Area 1 cut obliquely across the former Roman enclosures, for example, and similarly the furrows in Area 4 cut diagonally across the northern enclosure complex of the Roman settlement. The medieval furlongs thus appear to take their orientation from the adjacent Leckhampton Lane and disregard the alignments of the Roman features, which had evidently long since been forgotten by this time.

APPENDIX A OSTEOLOGICAL AND DENTITION SUMMARIES OF THE INHUMATION BURIALS

Skeleton 2005

Completeness category	0-25%
Fragmentation	High
Surface condition	Grade 1
Overall preservation	Fair
Age	Prime adult (26-35 years)
Sex	Possible female
Stature	-
Non-metric traits	-
Platymeric/platycnemic classification	-
Non-dental pathology	-
Dental pathology	Dental caries, calculus, enamel pearl

Dental status

R	**Dentition**				**L**											
Pathology						Ca; EP			Ca	Ca	Ca	Ca		Ca; C	Ca; C	C
Present/absent	0	0	0	0	0	1	0	0	1	1	1	1	/	1	1	r
Maxillary	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
Mandibular	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
Present/absent	0	0	1	0	1	1	/	0	1	1	0	1	1	0	0	0
Pathology			Ca; C		Ca	Ca; C			Ca	Ca		Ca	Ca			

Key: 1 = present; 0 = absent; /= tooth lost post-mortem; Ca = calculus; r = root only; C = dental caries; EP = enamel pearl

Skeleton 2078

Completeness category	0-25%
Fragmentation	High
Surface condition	Grade 3
Overall preservation	Poor
Age	Adult unspecified (>18 years)
Sex	-
Stature	-
Non-metric traits	-
Platymeric/platycnemic classification	-
Non-dental pathology	-
Dental pathology	-

Skeleton 2112

Completeness category	51-75%
Fragmentation	Medium
Surface condition	Grade 2
Overall preservation	Fair
Age	Young adult (18-25 years)
Sex	Possible male
Stature	-
Non-metric traits	-
Platymeric/platycnemic classification	Platymeric
Non-dental pathology	Cribra orbitalia, Schmorl's nodes, ante-mortem fracture to the left first metacarpal
Dental pathology	Ante-mortem tooth loss, calculus, ante-mortem chips

Dental status

	R		Dentition				L									
Pathology	Ca						AC		Ca		Ca	Ca	Ca	Ca	Ca	Ca
Present/absent	1	1	X	1	1	1	1	1	1	/	1	1	1	1	1	1
Maxillary	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
Mandibular	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
Present/absent	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	r
Pathology	Ca	Ca	Ca	Ca	Ca	Ca					Ca	Ca	Ca	Ca	Ca	

Key: 1 = present; 0 = absent; /= tooth lost post-mortem; X = ante-mortem tooth loss; r = root only; Ca = calculus; AC = ante-mortem tooth chips

Skeleton 6356

Completeness category	26-50%
Fragmentation	High
Surface Condition	Grade 2
Overall preservation	Fair
Age	Adolescent (13-17 years)
Non-dental pathology	-
Dental pathology	Calculus

Dental status

	R		Dentition				L									
Pathology			Ca	Ca	Ca		Ca							Ca	Ca	
Present/absent	0	1	1	1	1	0	1	0	1	1	1	0	1	1	1	0
Maxillary	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
Mandibular	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
Present/absent	U	1	0	1	1	0	0	0	0	0	0	1	1	0	0	U
Pathology																

Key: 1 = present; 0 = absent; U = unerupted; Ca = calculus

Skeleton 6357

Completeness category	51-75%
Fragmentation	High
Surface condition	Grade 1
Overall preservation	Fair
Age	Prime adult (26-35 years)
Sex	Probable male
Stature	-
Non-metric traits	-
Platymeric/platycnemic classification	-
Non-dental pathology	Symphalangism, cribra orbitalia, Schmorl's nodes
Dental pathology	Calculus

Dental status

	R			**Dentition**					**L**							
Pathology	Ca	Ca	Ca	Ca	Ca	Ca	Ca	Ca		Ca		Ca	Ca	Ca	Ca	Ca
Present/absent	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1
Maxillary	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
Mandibular	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
Present/absent	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1
Pathology	Ca	Ca	Ca	Ca	Ca	Ca	Ca			Ca	Ca	Ca	Ca	Ca	Ca	Ca

Key: 1 = present; 0 = absent; Ca = calculus

Skeleton 8005

Completeness category	26-50%
Fragmentation	High
Surface condition	Grade 1
Overall preservation	Fair
Age	Prime adult (26-35 years)
Sex	Possible male
Stature	-
Non-metric traits	-
Platymeric/platycnemic classification	-
Non-dental pathology	Symphalangism, cribra orbitalia, Schmorl's nodes
Dental pathology	Ante-mortem tooth loss, dental caries, calculus, periapical cavity, alveolar bone growing over a tooth root

Dental status

	R		Dentition						L							
Pathology						Ca; C		PC			Ca; C					
Present/absent	0	0	0	0	X	1	X	X	X	X	1	X	X	X	0	0
Maxillary	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
Mandibular	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
Present/absent	0	1	X	r	1	0	1	r	r	1	r	r	X	X	1	1
Pathology		Ca			Ca		Ca; C	Ca		Ca; C		O			Ca; C	Ca; C

Key: 1 = present; 0 = absent; /= tooth lost post-mortem; X = ante-mortem tooth loss; r = root only; Ca = calculus; PC = periapical cavity; O = other

Skeleton 8023

Completeness category	26-50%
Fragmentation	High
Surface condition	Grade 2
Overall preservation	Fair
Age	Prime adult (26-35 years)
Sex	Possible male
Stature	-
Non-metric traits	Accessory supra-orbital foramen
Platymeric/platycnemic classification	Platymeric
Non-dental pathology	Schmorl's nodes
Dental pathology	Dental caries, calculus, ante-mortem tooth chips

Dental status

	R		**Dentition**			**L**										
Pathology				Ca; C		Ca	Ca	Ca; AC	Ca; AC	Ca; AC	Ca; AC			Ca		Ca
Present/absent	0	0	0	1	0	1	1	1	1	1	1	0	0	1	0	1
Maxillary	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
Mandibular	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
Present/absent	1	0	1	1	1	1	1	0	0	1	1	1	0	1	1	0
Pathology	Ca		Ca; C	Ca	Ca	Ca	Ca			Ca	Ca	Ca		Ca	Ca	

Key: 1 = present; 0 = absent; /= tooth lost post-mortem; X = ante-mortem tooth loss; r = root only; Ca = calculus; C = dental caries; AC = ante mortem tooth chips

APPENDIX B MEASUREMENTS TAKEN FOR DOMESTIC SPECIES

Table B.1: Measurements (in mm) taken from domestic cattle elements

Phase	Species	Element	Side	GL	Bp	Bd	SD/SC
2	Cattle	astragalus	left	56.3	0	34	0
3a	Cattle	humerus	right	0	0	75	0
3a	Cattle	metacarpal	left	174	53	56	30.2
3b	Cattle	metatarsal	left	217	57	0	28.8
3b	Cattle	metatarsal	left	0	43	0	0
3b	Cattle	metacarpal	left	170	0	0	0
3b	Cattle	astragalus	right	58	0	35	0
3b	Cattle	astragalus	left	63	0	42	0
3b	Cattle	metatarsal	right	0	46	0	0
3b	Cattle	tibia	right	0	0	53	0
3b	Cattle	astragalus	left	60.9	0	38	0
3b	Cattle	metatarsal	right	0	48	0	0

Table B.2: Measurements (in mm) taken from caprine elements

Phase	Species	Element	Side	GL	Bp	Bd	SD/SC
3a	Sheep/goat	metacarpal	left	114	19	22	10.9
3b	Sheep/goat	metacarpal	left	0	22	0	0
3b	Sheep/goat	tibia	right	0	0	22	0
3b	Sheep/goat	metacarpal	left	0	18	0	0
3b	Sheep/goat	metacarpal	right	0	18	0	0
4	Sheep/goat	tibia	right	0	0	24	0
5	Sheep/goat	radius	right	0	0	32	0
5	Sheep/goat	tibia	right	0	0	28	0

Table B.3: Measurements (in mm) taken from pig elements

Phase	Species	Element	Side	GL	Bp	Bd
3	Pig	2nd phalanx		19.7	31.2	0
3a	Pig	4th metacarpal	left	0	16	0
3b	Pig	tibia	left	0	0	21.4
3b	Pig	radius	left	0	26.5	0

APPENDIX C BIBLIOGRAPHY

ABC = Cottam, E, De Jersey, P, Rudd, C and Sills, J, 2011 *Ancient British Coins*, Chris Rudd, Greenlight Publishing

Albarella, U, 1997 *Iron Age and Roman animal bones excavated in 1996 from Norman Cross, Tort Hill East, Tort Hill West and Vinegar Hill, Cambridgeshire*, English Heritage Res Rep 108/1997, http://research.historicengland.org.uk/Report.aspx?i=4944&ru=%2FResults.aspx%3Fp%3D301

Albarella, U, 2007 The end of the Sheep Age: people and animals in the late Iron Age, in C Haselgrove, and T Moore (eds), *The later Iron Age in Britain and beyond*, Oxbow Books, Oxford, 393–406

Allen, J R L, and Scott, A C, 2014 The whetstone blanks from the forum gutter at Roman Wroxeter: the case for provenance, *Trans Shropshire Archaeol Hist Soc* **87**, 1–12

Allen, M, 2017 Pastoral farming, in Allen *et al*. 2017, 85–141

Allen, M, and Lodwick, L, 2017 Agricultural strategies in Roman Britain, in Allen *et al*. 2017, 142–77

Allen, M, Lodwick, L, Brindle, T, Fulford, M, and Smith, A, 2017 *The rural economy of Roman Britain,* New visions of the countryside of Roman Britain, vol. 2*,* Britannia Monograph Series No. **30**

Allen, T G, Darvill, T C, Green, L S, and Jones, M U, 1993 *Roughground Farm, Lechlade, Glos.: a prehistoric and Roman landscape*, Oxford University Committee for Archaeology, Thames Valley Landscapes: The Cotswold Water Park **1**, Oxford

Allen, T, and Mitchell, N, 2001 Dorney Eton Rowing Lake, *South Midlands Archaeol* **31**, 26–30

Allsop, K A, and Brand Miller, J, 1996 Honey revisited: a reappraisal of honey in pre-industrial diets, *British Journal of Nutrition* **75**, 513–20

Andrews, C, 2015 *Roman seal boxes in Britain*, BAR Brit Ser **567**, Oxford

ASDU, 2006 Land at Leckhampton, Cheltenham, Gloucestershire: geophysical surveys, https://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-448-1/dissemination/pdf/archaeol3-17248_1.pdf

Ash, H B (trans), 1941 *Columella on agriculture, books 1–4*, Loeb Classical Library, Harvard

Atkin, M, and Garrod, A, 1987 Archaeology in Gloucester, *Trans Bristol Gloucestershire Archaeol Soc* **105**, 232–41

Aufderheide, A C, and Rodríguez-Martín, C, 1998 *The Cambridge encyclopedia of human paleopathology*, Cambridge University Press, Cambridge

Bass, W M, 1981 Human osteology: a laboratory and field manual, Missouri Archaeological Society, Colombia

Baxter, I, 2002 The animal bones, in Catchpole 2002, 96–8

Behrensmeyer, A K, 1978 Taphonomic and ecologic information from bone weathering, *Paleobiology* **4**, 150–62

Berry, A C, and Berry, A J, 1967 Epigenetic variation in the human cranium, *Journal of Anatomy* 101, 361–79

Boardman, S, and Jones, G, 1990 Experiments on the effects of charring on cereal plant components, *J Archaeol Sci* **17**, 1–11

Boessneck, J, 1969 Osteological differences between sheep (*Ovis aries Linné*) and goat (*Capra hircus Linné*), in Brothwell and Higgs 1969, 331–58

Booth, P, 2004 Quantifying status: some pottery data from the Upper Thames Valley, *J Roman Pottery Stud* **11**, 39–52

Booth, P, 2016 Oxford Archaeology Roman pottery recording system: an introduction, unpublished document, updated November 2019

Booth, P, forthcoming Roman pottery, in *A late Iron Age enclosure, early Roman pottery production and later Roman agriculture at Longford, Gloucestershire* (M Allen and P Booth), Oxford Archaeology

Booth, P, Dodd, A, Robinson, M, and Smith, A, 2007 *The Thames through time; the archaeology of the gravel terraces of the Upper and Middle Thames. The early historical period: AD 1–1000*, Oxford Archaeology Thames Valley Landscapes Monograph **27**, Oxford

Booth, P, and Simmonds, A, 2018 *Gill Mill: later prehistoric landscape and a Roman nucleated settlement in the lower Windrush Valley at Gill Mill, near Witney, Oxfordshire*, Oxford Archaeology Thames Valley Landscapes Monograph No. **42**, Oxford

Braadbaart, F, 2004 Carbonization of peas and wheat – a window into the past. A laboratory study, Phd Thesis, Leiden

Brain, C K, 1981 Parts of the skeleton: survival and disappearance, in C K Brain (ed.), *The hunters or the hunted? An introduction to African cave taphonomy*, University of Chicago Press, Chicago, 11–27

Brickley, M, 2004 Determination of sex from archaeological skeletal material and assessment of parturition, in Brickley and McKinley 2004, 23–5

Brickley, M, and McKinley, J I (eds), 2004 *Guidelines to the standards for recording human remains*, IfA Paper No. **7**, British Association for Biological Anthropology and Osteoarchaeology and Institute for Archaeologists

Brickstock, R J, 2004 *The production, analysis and standardisation of Romano-British coin reports*, English Heritage

British Geological Survey, nd *Geology of Britain viewer*, http://mapapps.bgs.ac.uk/geologyofbritain/home.html

Brothwell, D R, 1981 *Digging up bones*, Oxford University Press, Oxford

Brothwell, D R, and Higgs, E S, 1969 *Science in archaeology: a survey of progress and research*, Thames and Hudson, London

Buikstra, J E, and Ubelaker, D H (eds), 1994 *Standards for data collection from human skeletal remains*, Arkansas Archaeological Survey Research Series **44**, Arkansas

Campbell, G, 2017 Market forces – a discussion of crop husbandry, horticulture and trade in plant resources in southern England, in D Bird (ed.), *Agriculture and industry in south-eastern Roman Britain*, Oxbow, Oxford, 134–55

Cappers, R T J, Bekker, R M, and Jans, J E A, 2006 *Digital Seed Atlas of the Netherlands*, Groningen Archaeological Studies **4**, Barkhuis Publishing, Eelde, The Netherlands, www.seedatlas.nl

Catchpole, T, 2002 Excavations at West Drive, Cheltenham, Gloucestershire, *Trans Bristol and Gloucestershire Archaeol Soc* **120**, 89–102

CgMs, 2015 Land west of Farm Lane, Shurdington, Gloucestershire: written scheme of investigation for a programme of archaeological investigation, CgMs Consulting unpublished client report

Clifford, E M, 1933 The Roman villa, Hucclecote, near Gloucester, *Trans Bristol Gloucestershire Archaeol Soc* **55**, 323–76

Clifford, E M, 1933 The Hucclecote Roman villa, *Trans Bristol Gloucestershire Archaeol Soc* **80**, 42–9

Clift, J G N, 1933 Leckhampton Moat, *Trans Bristol Gloucestershire Archaeol Soc* **55**, 235–48

Clough, S, and Boyle, A, 2010 Human remains, in P Booth, A Simmonds, A Boyle, S Clough, H E M Cool and D Poore, *The late Roman cemetery and Lankhills, Winchester: excavations 2000–2005*, Oxford Archaeology Monograph No. **10**, 339–428

Cohen, A, and Serjeantson, D, 1996 *A manual for the identification of bird bones from archaeological sites*, rev edn, Archetype Publications Ltd, London

Coleman, L, and Watts, M, 2008 Romano-British agriculture at the former St James's Railway Station, Cheltenham: excavations in 2000–2001, in Holbrook (ed.) 2008, 85–105

Coleman, L, Hancock, A, and Watts, M, 2006 *Excavations on the Wormington to Tirley pipeline, 2000*, Cotswold Archaeology Monograph **3**, Cirencester

Cool, H E M, 1983 A study of the Roman personal ornaments made of metal, excluding brooches, from Southern Britain, unpublished PhD thesis, University of Wales

Cool, H E M, 1990 Roman metal hair pins from Southern Britain, *Archaeol J* **147**, 148–82

Cotswold Archaeology, 2006 Land at Leckhampton, Cheltenham, Gloucestershire: archaeological evaluation, unpublished client report, https://legacy-reports.cotswoldarchaeology.co.uk/content/uploads/2014/02/2247-Leckhampton-Cheltenham-Eval-06140-complete.pdf

Cotswold Archaeology, 2012 Land at Leckhampton, Leckhampton, Gloucestershire: archaeological evaluation, unpublished client report, https://legacy-reports.cotswoldarchaeology.co.uk/content/uploads/2015/03/3581-Leckhampton-Eval-11301-complete.pdf

Cotswolds Conservation Board, 2020 *Woodland* https://www.cotswoldsaonb.org.uk/our-landscape/woodland/, accessed 27/1/2020

Cotter, J, in prep. Pottery, in A Simmonds and S Teague, New light on the Saxon minster and medieval priory at Bicester: excavations at Old Place Yard, 2016–17, *Oxoniensia*

Cranfield University, nd *Soilscapes*, http://www.landis.org.uk/soilscapes/

Crummy, N, 2014 Iron Age and Roman brooches, in E Durham and M Fulford, *A late Roman town house and its environs. The excavations of C D Drew and K C Collingwood Selby in Colliton Park, Dorchester, Dorset, 1937–8*, Britannia Monograph Series No. **26**, 156–67

Cunliffe, B, 1991 *Iron Age communities in Britain*, 3rd edn, Routledge, London

Cuttlet, R, 2010 Iron Age and Romano-British activity at Arle Court, Cheltenham, Gloucestershire, 1999, *Trans Bristol Gloucestershire Archaeol Soc* **128**, 55–72

Dar, G, Masharawi, Y, Peleg, S, Steinberg, N, May, H, Medlej, B, Peled, N, and Hershkovitz, I 2010 Schmorl's nodes distribution in the human spine and its possible etiology, *European Spine Journal* **19 (4)**, 670–5

Davies, J A, 1998 The coins, in P Leach, *Great Witcombe Roman villa, Gloucestershire*, Brit Archaeol Rep Brit Ser **266**, Oxford, 94–6

Davies, J A, 1999 The coins, in A Mudd, R J Williams and A Lupton, *Excavations alongside Roman Ermin Street, Gloucestershire and Wiltshire: The archaeology of the A419/A417 Swindon to Gloucester Road Scheme*, Vol 2, Oxford Archaeol Unit, 372–81

Davis, S J M, 1980 Late Pleistocene and Holocene equid remains from Israel, *Zool. J. Linn. Soc.* **70**, 289–312, doi:10.1111/j.1096-3642.1980.tb00854.x

Donnelly, M, 2014 Worked flint, in A Simmonds, *The archaeology of the Banbury Flood Alleviation Scheme, Oxfordshire*, Oxford Archaeology Monograph **21**, Oxford, 57–81

Donnelly, M, 2018 Worked flint, in A Simmonds and T Martin, Prehistoric activity and burials, Roman field boundaries and an Anglo-Saxon settlement at Shottery, Stratford-upon-Avon, *Trans Birmingham Warwickshire Archaeol Soc* **120**, 15–18

Eckardt, H, and Crummy, N, 2008 *Styling the body in late Iron Age and Roman Britain*, Monographies Instrumentum **36**, Éditions Monique Mergoil, Montagnac

Edwards, R, and Hurst, J D, 2000 Iron Age settlement and a medieval and later farmstead: excavations at 93–97 High Street, Evesham, *Trans Worcestershire Archaeol Soc* **3 ser 17**, 73–111

Esmonde Cleary, S, 2000 Putting the dead in their place: burial location in Roman Britain, in J Pearce, M Millett and M Struck (eds), *Burial, society and context in the Roman world*, Oxbow, Oxford, 127–42

Feugère, M, 1985 *Les fibules en Gaule méridionale: de la conquête à fin du Ve siècle après J-C*, Revue archéologique de Narbonnaise, supplément **12**, Paris

Finnegan, M, 1978 Non-metric variation of the infracranial skeleton, *Journal of Anatomy* **125**, 23–37

Forster, E S, and Heffner, E H (trans), 1968 *Columella on agriculture, books 5–9*, Loeb Classical Library, Harvard

Gale, R, 2003 Wood-based industrial fuels and their environmental impact in lowland Britain, in P Murphy and P E J Wiltshire (eds), *The environmental archaeology of industry*, Symposia of the Association for Environmental Archaeology No 20, Oxbow, Oxford, 30–47

Galloway, A, 1999 *Broken bones: anthropological analysis of blunt force trauma,* Charles C Thomas, Springfield, Illinois

Garnsey, P, 1999 *Food and society in classical antiquity*, Cambridge University Press, Cambridge

Gill, F B, and Donsker, D, 2015 *IOC world bird list (v 5.1)*, doi:10.14344/IOC.ML.5.1

Gillam, J P, 1976 Coarse fumed ware in northern Britain and beyond, *Glasgow Archaeol J* **4**, 57–80

Gloucester and District Archaeological Research Group, 1996 Romano-British settlement at Brizen Playing Field, Up Hatherley Way, Cheltenham, Gloucestershire, unpublished archaeological watching brief report

Grant, A, 1982 The use of tooth wear as a guide to the age of domestic ungulates, in Wilson *et al*., 1982, 91–108

Guest, P, 2007 The coins, in T Catchpole, Excavations at the Sewage Treatment Works, Dymock, Gloucestershire, *Trans Bristol Gloucestershire Archaeol Soc* **125**, 186–7

Halstead, P L J, Collins, P, Isaakidou, V, 2002 Sorting the sheep from the goats: morphological distinctions between the mandibles and mandibular teeth of adult Ovis and Capra, *J Archaeol Sci* **29**, 545–53, doi:10.1006/jasc.2001.0777

Hambleton, E, 2008 *Review of middle Bronze Age–late Iron Age faunal assemblages from southern Britain*, English Heritage, London

Hart, J, and McSloy, E R, 2008 Prehistoric and early historic activity, settlement, and burial at Walton Cardiff, near Tewkesbury: excavations at Rudgeway Lane in 2004–2005, in Holbrook (ed.) 2008, 1–84

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

Heighway, C M, 1980 Roman cemeteries in Gloucester district, *Trans Bristol Gloucestershire Archaeol Soc* **98**, 57–72

Higbee, L, 2004 The animal bone, in Coleman *et al*. 2004, 67–70

Hillman, G, 1981 Reconstructing crop husbandry practices from the charred remains of crops, in R J Mercer (ed.), *Farming practice in British prehistory*, Edinburgh University Press, Edinburgh, 123–62

Hillman, G, Mason, S, de Moulins, D, and Nesbitt, M, 1995 Identification of archaeological remains of wheat, *Circaea* **12(2)**, 195–209

Hillson, S, 1996 *Dental anthropology*, Cambridge University Press, Cambridge

Holbrook, N, 2006 The Roman period, in N Holbrook and J Juřica (eds), *Twenty-five years of archaeology in Gloucestershire: a review of new discoveries and new thinking in Gloucestershire, South Gloucestershire and Bristol, 1979–2004*, Bristol and Gloucestershire Archaeological Report No. **3**, Kemble and Stroud

Holbrook, N (ed.), 2008 *Iron Age and Romano-British agriculture in the North Gloucestershire Severn Vale*, Bristol and Gloucestershire Archaeological Report No. **6**, Kemble

Hooke, D 1978 Early Cotswold woodland, *J Hist Geography* **4**, 333–41

Hooper, W D (trans), 1935 *Marcus Porcius Cato on agriculture*, Loeb Classical Library, Harvard

Hull, M R, 1967 The Nor'nour brooches, in D Dudley 1967 Excavations on Nor'Nour in the Isles of Scilly, 1962–6, *Archaeol J* **124**, 28–64

Hunter, K, 2016 Plant macrofossils, in T Allen, K Brady and S Foreman, *A Roman villa and other Iron Age and Roman discoveries at Bredon's Norton, Fiddington and Pamington along the Gloucester Security of Supply Pipeline*, Oxford Archaeology Monograph **25**, Oxford, 160–9

Hunter, K, 2018 Charred plant remains and wood charcoal assessment, in OA 2018

Jacomet, S, 2006 *Identification of cereal remains from archaeological sites*, 2nd edn, Archaeobotany Lab, IPAS, Basel University

Johnstone, C J, 2004 *A biometric study of equids in the Roman world*, University of York

Jones, G G, 2006 Tooth eruption and wear observed in live sheep from Butser Hill, the Cotswold Farm Park and five farms in the Pentland Hills, UK, in D Ruscillo (ed.), *Recent advances in ageing and sexing animal bones*, Oxbow Books, Oxford, 155–78

Jones, G G, and Sadler, P, 2012 Age at death in cattle: methods, older cattle and known-age reference material, *Environ Archaeol* **17**, 11–28, doi:10.1179/1461410312Z.0000000002

Kraay, C M, 1960 Coins, in A G Hunter, A Romano-British bath-block at Trevor Road, Hucclecote, Glos., *Trans Bristol Gloucestershire Archaeol Soc* **79**, 171

Kratochvil, Z, 1969 Species criteria on the distal section of the tibia in *Ovis ammon* F. *aries* L. and *Capra aegagrus* F. *hircus* L., *Acta Vet. Brno* **38**, 483–90

Lambrick, G, with Robinson, M, 2009 *The Thames through time: the archaeology of the gravel terraces of the Upper and Middle Thames. The Thames Valley in later prehistory: 1500 BC–AD 50*, Oxford Archaeology Thames Valley Monograph **29**, Oxford

Lane, A, and Redknap, M, 2019 *Llangorse Crannog: the excavation of an early medieval royal site in the kingdom of Brycheiniog*, Oxbow Books, Oxford

Leach, P, 1998 *Great Witcombe Roman villa, Gloucestershire*, BAR Brit Ser **266**, Oxford

Levine, M A, 1982 The use of crown height measurements and eruption-wear sequences to age horse teeth, in Wilson *et al*. 1982, 223–50

Lieverse, A R, 1999 Diet and the aetiology of dental calculus, *International Journal of Osteoarchaeology* **9 (4)**, 219–32

Lodwick, L, 2017 Arable farming, plant foods and resources, in Allen *et al*. 2017, 11–84

Lovejoy, C O, Meindl, R S, Pryzbeck, T R, and Mensforth, R P, 1985 Chronological metamorphosis of the auricular surface of the ilium: a new method for the determination of adult skeletal age at death, *American J Physical Anthropology* **68**, 15–28

Lovell, J, Wakeham, G, Timby, J, and Allen, M J, 2007 Iron-Age to Saxon farming settlement at Bishop's Cleeve, Gloucestershire: excavations south of Church Road, 1998 and 2004, *Trans Bristol Gloucestershire Archaeol Soc* **125**, 95–129

Lyman, R L, 1996 Applied zooarchaeology: the relevance of faunal analysis to wildlife management, *World Archaeol* **28**, 110–25

McKerracher, M, 2018 *Farming transformed in Anglo-Saxon England: agriculture in the long eighth century*, Oxbow, Oxford

McKinley, J I, 2000a Cremation burials, in B Barber and D Bowsher (eds), *The eastern cemetery of Roman London: excavations 1983–1990*, Museum of London Archaeological Servoces Monograph **4**, 264–77

McKinley, J I 2000b The analysis of cremated bone, in M Cox and S Mays (eds), *Human osteology in archaeology and forensic science,* Greenwich Medical Media, London, 403–21

McKinley, J I 2004 Compiling a skeletal inventory: cremated human bone, in Brickley and McKinley 2004, 9–13

McKinley, J I, 2006 Cremation...the cheap option?, in C Knusel and R Gowland (eds), *The social archaeology of funerary remains*, Oxbow Books, Oxford, 81–8

McKinley, J I 2013 Cremation: excavation, analysis and interpretation of material from cremation-related contexts, in S Tarlow and L Nilsson Stutz (eds), *The Oxford handbook of the archaeology of death and burial*, Oxford University Press, Oxford, 147–67

Madgwick, R, and Mulville, J, 2015 Feasting on fore-limbs: conspicuous consumption and identity in later prehistoric Britain, *Antiquity* **89**, 629–44, doi:10.15184/aqy.2015.24

Mackreth, D F, 2011 *Brooches in late Iron Age and Roman Britain*, 2 volumes, Oxbow, Oxford

Masser, P, and McGill, B, 2004 Excavations of Romano-British sites at Tokington Park Farm and Westerleigh, South Gloucestershire, in 1997, *Trans Bristol Gloucestershire Archaeol Soc* **122**, 95–116.

May, E, 1985 Widerristhöhe und Langknochenmaße bei Pferden – ein immer noch aktuelles Problem, *Zeitschrift für Säugetierkunde* **50**, 368–82

Mays, S, 2004 *Human bones from archaeological sites: guidelines for producing assessment documents and analytical reports*, English Heritage, London

Mellor, M, 1994 Oxfordshire pottery: a synthesis of middle and late Saxon, medieval and early post-medieval pottery in the Oxford region, *Oxoniensia* **59**, 17–217

Miles, A E W, 1962 Assessment of the ages of a population of Anglo-Saxons from their dentitions, *Proceedings of the Royal Society of Medicine* **55**, 881–6

Miles, A E W, 2001 The Miles method of assessing age from tooth wear revisited, *J Archaeol Sci* **28**, 973–82

Miles, D, Palmer, S, Smith, A, and Jones, G P, 2007 *Iron Age and Roman settlement in the Upper Thames Valley: excavations at Claydon Pike and other sites within the Cotswolds Water Park*, Oxford Archaeology Monograph No. **26**, Oxford

Millet, M, and Graham, D, 1986 *Excavations on the Romano-British small town at Neatham, Hampshire 1969–1979*, Hampshire Field Club Monograph **3**, Winchester

MoLA, 2014 *London medieval and post-medieval pottery codes*, Museum of London Archaeology, http://www.mola.org.uk/medieval-and-post-medieval-pottery-codes, accessed 11 Jan 2019

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

Moore, T, 2006 *Iron Age societies in the Severn-Cotswolds: developing narratives of social and landscape change*, BAR Brit Ser **421**, Oxford

Moorees, C F A, Fanning, E A, and Hunt, E E, 1963 Age variation of formation stages for ten permanent teeth, *Journal of Dental Research* **42**, 1490–502

Moore-Scott, T, 1999 Leckhampton: the fields beneath, *Leckhampton Local History Society Research Bulletin* **1**, 25–38

Moynihan, P, 2002 Dietary advice in dental practice, *British Dental Journal* **193 (10)**, 563–8

Moynihan, P, 2012 The role of diet in the prevention of dental diseases, in H Limeback (ed.), *Comprehensive Preventative Dentistry*, John Wiley and Sons Ltd, Chichester, 99–114

Mudd, A, and Lupton, A, 1999 Middle Duntisbourne, in Mudd *et al.* 1999, 77–86

Mudd, A, and Lawrence, S, 1999 Duntisbourne Grove, in Mudd et al. 1999, 86–98

Mudd, A, Williams, R J, and Lupton, A, 1999 *Excavations alongside Roman Ermin Street, Gloucestershire and Wiltshire: the archaeology of the A419/A417 Swindon to Gloucester Road Scheme. Volume 1: prehistoric and Roman activity*, Oxford Archaeological Unit, Oxford

Nichols, P, 1999 An archaeological evaluation at Dean Farm, Bishop's Cleeve, Gloucestershire, Gloucestershire County Council Archaeology Service unpublished report, https://doi.org/10.5284/1029007

OA, 2008 Brizen Farm, Shurdington, Gloucestershire: archaeological evaluation report, Oxford Archaeology unpublished client report, https://library.thehumanjourney.net/122/

OA, 2016 Land west of Farm Lane, Shurdington, Gloucestershire: written scheme of investigation for the completion of a programme of archaeological mitigation, Oxford Archaeology unpublished client report

OA, 2019a Proposed Cheltenham Secondary School, Farm Lane, Leckhampton, Gloucestershire: archaeological evaluation report, Oxford Archaeology unpublished client report

OA, 2019b Innsworth, Gloucestershire: Post-Excavation Assessment and Updated Project Design. Unpublished client report

Ortner, D J, 2003 *Identification of pathological conditions in human skeletal remains*, Academic Press, San Diego

Payne, S, 1972 Partial recovery and sample bias: the results of some sieving experiments, in E S Higgs (ed.), *Papers in economic prehistory*, Cambridge University Press, Cambridge, 49–62

Payne, S, 1985 Morphological distinctions between the mandibular teeth of young sheep, *Ovis*, and goats, *Capra*, *J Archaeol Sci* **12**, 139–47, doi:10.1016/0305-4403(85)90058-5

Payne, S, 1987 Reference codes for wear states in mandibular teeth of young sheep, *Ovis*, and Goats, *Capra*, *J Archaeol Sci* **14**, 609–14

Paynter, S, 2008 Metalworking remains, in P Booth, A-M Bingham and S Lawrence, *The Roman roadside settlement at Westhawk Farm, Ashford, Kent: excavations 1998–9*, Oxford Archaeology Monograph **2**, Oxford

Peacock, D P S, 1968 A petrological study of certain Iron Age pottery from western England, *Proc Prehist Soc* **13**, 414–27

Pearce, J, 1999 The dispersed dead: preliminary observations on burial and settlement space in rural Roman Britain, in P Baker, C Forcey, S Jundi and R Witcher, *TRAC 98: proceedings of the eight annual Theoretical Roman Archaeology Conferenc*e, Oxbow, Oxford, 151–62

Pearce, J, 2013 *Contextual archaeology of burial practice: case studies from Roman Britain,* BAR Brit Ser **588**, Oxford

Pfirrmann, C W A, and Resnick, D, 2001 Schmorl's nodes of the thoracic and lumbar spine: radiographic-pathologic study of prevalence, characterization, and correlation with degenerative changes of 1,650 spinal levels in 100 cadavers, *Radiology* **219 (2)**, 368–74

Phenice, T W, 1969 A newly developed visual method of sexing the os pubis, *American Journal of Physical Anthropology* **30**, 297–301

Philpott, R, 1991 *Burial practices in Roman Britain: a survey of grave treatment and furnishing, AD 43–410*, BAR Brit Ser **219**, Oxford

Plomp, K A, Roberts, C A, and Strand Viðarsdóttir, U, 2012 Vertebral morphology influences in the development of Schmorl's nodes in the lower thoracic vertebrae, *American J Physical Anthropology* **149 (4)**, 572–82

Powell, A, 1999 Animal bone: Middle Duntisbourne and Duntisbourne Grove, in Mudd *et al*. 1999, 431–49

Powell, K, Smith, A, and Laws, G, 2010 *Evolution of a farming community in the Upper Thames Valley: excavation of a prehistoric, Roman and post-Roman landscape at Cotswold*

Community, Gloucestershire and Wiltshire, Oxford Archaeology Thames Valley Landscapes Monograph **31**, Oxford

Price, E, 2000 *Frocester: a Romano-British settlement, its antecedents and successors. Volume 3: excavations 1995–2009*, Gloucester and District Archaeological Research Group, Gloucester

Reece, R, 1991 *Roman coins from 140 sites in Britain*, Cotswold Studies **4**, Cirencester

Reece, R, 1998 Roman coins, in A J Barber and G T Walker, Home Farm, Bishop's Cleeve: excavation of a Romano-British occupation site 1993–4, *Trans Bristol Gloucestershire Archaeol Soc* **116**, 133–4

Rawes, B, 1981 The Romano-British site at Brockworth, Glos., *Britannia* **12**, 45–77

Rawes, B, 1982 Gloucester Severn Valley Ware, *Trans Bristol Gloucestershire Archaeol Soc* **100**, 33–46

Reece, R, 2000 Coin usage at Frocester, in E Price, *Frocester. A Romano-British settlement, its antecedents and successors, Volume 2: The finds*, Stonehouse, 25–32

Reece, R, 2009 Roman coins, in S Trow, S James and T Moore, *Becoming Roman, being Gallic, staying British. Research and excavations at Ditches 'hillfort' and villa 1984–2006*, Oxford, 148

Rees, G, 2008 Enclosure boundaries and settlement individuality in the Iron Age, in O Davies, N Sharples and K Waddington (eds), *Changing perspectives on the first millennium BC: proceedings of the Iron Age research student seminar 2006*, Oxbow Books, Oxford

RIC II = Mattingly, H, and Sydenham, E A, 1926, *The Roman Imperial Coinage Volume II, Vespasian to Hadrian*, Spink, London

RIC II Part 1 = Carradice, I A and Buttrey, T V, 2007, *The Roman Imperial Coinage Volume II Part 1, From AD 69 to AD 96 Vespasian to Domitian*, 2nd fully rev edn, Spink, London

Roberts, A J, 2009 Fieldwork at Willington Court Roman villa, Sandhurst, Gloucestershire, *Glevensis* **42**, 17–29

Roberts, C, and Cox, M, 2003 *Health and disease in Britain from prehistory to the present day*, Sutton Publishing, Stroud

Roberts, C, and Manchester, K, 1995 *The archaeology of disease*, Cornell University Press, New York

Rodwell, J S, 1992 *British plant communities, volume 3: grasslands and montane communities*, Cambridge University Press, Cambridge

Rogers, J, and Waldron, T, 1995 *A field guide to joint disease in archaeology*, J Wiley, Chichester and New York

Rohnbognor, A, 2018 The rural population, in Smith *et al*. 2018a, 281–345

Rugg-Gunn, A J, Hackett, A F, and Appleton, A R, 1987 Relative cariogenicity of starch and sugars in a 2-year longitudinal study of 405 English schoolchildren, *Caries Research* **21 (5)**, 464–73

Rutherford, M, 2019a Pollen, in Oxford Archaeology, *Hunts Grove, Quedgeley, Gloucestershire, Areas R23-29: Post-Excavation Assessment and Updated Project Design*, 78–83

Rutherford, M, 2019b Pollen, in Oxford Archaeology, *Innsworth, Gloucestershire: Post-Excavation Assessment and Updated Project Design*, 34–6

Saville, A, 1990 *Hazelton North, Gloucestershire, 1979–82: the excavation of a Neolithic long cairn of the Cotswald-Severn group*, English Heritage, London

Savio, H, 2011 *Sustainable agriculture in ancient Rome*, Senior Capstone Project 2, http://digitalwindow.vassar.edu/senior_capstone/2

Scales, R, 2008 Environmental data, in OA 2008

Scheuer, L, and Black, S, 2000 *Developmental juvenile osteology,* Elsevier Academic Press, Oxford

Schweingruber, F, 1990 *Microscopic wood anatomy*, 3rd edn*,* Swiss Federal Institute for Forest, Snow and Landscape Research, Birmensdorf

Seetah, K, 2006 Butchery as an analytical tool: a comparative study of the Romano-British and medieval periods, Ph. D. dissertation, University of Cambridge

Serjeantson, D, 1989 Animal remains in the tanning trade, in D Serjeantson and T Waldron (eds), *Diet and crafts in towns: the evidence of animal remains from the Roman to the post-medieval periods*, BAR Brit Ser **199**, Oxford, 129–46

Serjeantson, D, 1996 Animal bone, in S Needham, and T Spence (eds), *Runnymede Bridge Research Excavations, volume 2: refuse and disposal at Area 16 East, Runnymede*, British Museum Press, London, 194–223

Shaffrey, R, 2015 Intensive milling practices in the Romano-British landscape of southern England. Using newly established criteria for distinguishing millstones from rotary querns, *Britannia* **46**, 55–92

Shaffrey, R, 2018 Grain processing in and around Roman Cirencester. What can the querns and millstones tell us about supply to the Roman town?, *Trans Bristol and Gloucestershire Archaeol Soc* **136**, 161–70

Silver, I A, 1969 The ageing of domestic animals, in Brothwell and Higgs (eds) 1969, 283–302

Smith, A, 2007a Excavations at Neigh Bridge, Somerford Keynes, in Miles *et al*. 2007, 229–73

Smith, A, 2007b The late Iron Age and Roman landscape, in Miles *et al*. 2007, 373–90

Smith, A, 2016a Buildings in the countryside, in Smith *et al*. 2016, 44–74

Smith, A, 2016b Ritual deposition, in M Millett, L Revell and A Moore, *The Oxford handbook of Roman Britain*, Oxford University Press, Oxford, 641–59

Smith, A, 2016c The central belt, in Smith *et al*. 2016, 141–207

Smith, A, 2018 Death in the countryside, in Smith *et al*. 2018a, 205–80

Smith, A, Allen, M, Brindle, T, and Fulford, M, 2016 *The rural settlement of Roman Britain*, Britannia Monograph No. **29**, London

Smith, A, Allen, M, Brindle, T, Fulford, M, Lodwick, L, and Rohnbognor, A, 2018a Life and death in the countryside of Roman Britain, Britannia Monograph No. **31**, London

Smith, A, with Brindle, D, Fulford, M, and Lodwick, L, 2018b, in Smith *et al*. 2018a, 48–77

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

Steckel, R H, Larsen, C S, Sciulli, P W, and Walker, P L, 2006 *The Global History of Health Project data collection codebook*, unpublished manuscript, http://global.sbs.ohio-state.edu/new_docs/Codebook-01-24-11-em.pdf

Stevens, C, 2014 Charred plant remains, in N Cooke and A Mudd, A46 *Nottinghamshire: the archaeology of the Newark to Widmerpool Improvement Scheme, 2009*, Cotswold Archaeology Monograph No. **7**, Wessex Archaeology Monograph No. **14**, Cirencester and Salisbury

Stickler, T, 2003 Animal bone, in Thomas *et al*. 2003, 57–61

Stratascan, 2015 Land at Leckhampton, Gloucestershire: geophysical survey report, https://doi.org/10.5284/1037741

Strid, L, 2012 Animal bones, in E Biddulph, S Foreman, E Stafford and R Nicholson, *London Gateway: Iron Age and Roman salt making in the Thames Estuary. Excavation at Stanford Wharf Nature Reserve, Essex*, Oxford Archaeology Monograph No. **18**, Oxford, Specialist Report 15

Stuart-Macadam, P L, 1991 Anaemia in Roman Britain, in H Bush and M Zvelebil (eds), *Health in past societies: biocultural interpretations of human remains in archaeological contexts*, BAR Int Ser **567**, Oxford, 101–13

Sutherland, C H V, 1933 Coins, in E M Clifford, The Roman villa, Hucclecote near Gloucester, *Trans Bristol Gloucestershire Archaeol Soc* **55**, 366–7

Thomas, A, Holbrook, N, and Bateman, C, 2003 *Later prehistoric and Romano-British burial and settlement at Hucclecote, Gloucestershire*, Bristol and Gloucestershire Archaeological Report No. **2**, Cirencester

Timby, J, 1990 Severn Valley wares: a reassessment, *Britannia* **21**, 243–52

Timby, J R, 1998 *Excavations at Kingscote and Wycomb, Gloucestershire*, Cotswold Archaeological Trust, Cirencester

Timby, J R, 2000 Pottery, in Price 2000, 125–62

Timby, J R, 2003 The pottery, in Thomas *et al*. 2003, 31–44

Timby, J R, 2017 What's on the table? A review of Roman pottery in the western central belt, in Allen *et al*. 2017, 305–36

Tomber, R, and Dore, J, 1998 *The national Roman fabric reference collection: a handbook*, Museum of London Archaeol Services Monograph No. **2**

Trotter, M, 1970 Estimation of stature from intact long bones, in T D Stewart (ed.), *Personal identification in mass disasters,* Smithsonian Institution Press, Washington DC, 71–83

Trotter, M, and Gleser, G, 1952 Estimation of stature from long-bones of American whites and negroes, *American J Physical Anthropology* **9**, 427–40

Trotter, M, and Gleser, G, 1958 A re-evaluation of estimation of stature based on measurements of stature taken during life and of long bones after death, *American J Physical Anthropology* **16(1)**, 79–123

van der Veen, M, 1988 Carbonised grain from a Roman granary at South Shields, North East England, in H. Küster (ed.), *Der prähistorische Mensch und seine Umwelt. Forschungen und Berichte zur Vor- und Frügeschichte in Baden-Württemberg* 31, Stuttgart, 353–65

van der Veen, M, 2014 Arable farming, horticulture, and food: expansion, innovation, and diversity in Roman Britain, in M Millett, L Revell, and A Moore (eds), *The Oxford handbook of Roman Britain*, DOI:10.1093/oxfordhb/9780199697713.013.046

Veldman, J K 2013 *Non-metric traits: an assessment of cranial and post-cranial non-metric traits in the skeletal assemblage from the 17th–19th century churchyard of Middenbeemster, the Netherlands*, unpublished Masters thesis, Leiden University

von Den Driesch, A, 1976 *A guide to the measurement of animal bones from archaeological sites*, Peabody Museum Press, Cambridge, Massachussets

Wakeham, G, and Bradley, P, 2013 A Romano-British malt house and other remains at Weedon Hill, Aylesbury, *Rec Buckinghamshire* **24**, 107–20

Waldron, T, 2007 *St. Peter's Barton-upon-Humber, Lincolnshire: a parish church and its community. Vol 2: the human remains*, Oxbow Books, Oxford

Walker, G, Thomas, A, and Bateman, C, 2004 Bronze Age and Romano-British sites south-east of Tewkesbury: evaluations and excavations 1991–7, *Trans Bristol Gloucestershire Archaeol Soc* **122**, 29–94

Walker, P L, Bathurst, R R, Richman, R, Gjerdrum, T, and Andrushko, V A, 2009 The causes of porotic hyperostosis and cribra orbitalia: a reappraisal of the iron-deficiency anaemia hypothesis, *American J Physical Anthropology* **139 (2)**, 109–25

Warman, S, 2008 Animal bone, in Coleman and Watts 2008, 101

Webster, P V, 1976 Severn Valley ware: a preliminary study, *Trans Bristol Gloucestershire Archaeol Soc* **94**, 18–46

Webster, P, 1996 *Roman samian pottery in Britain*, CBA Practical Handbook **13**

Wells, C, 1982 Human remains, in A McWhirr, L Viner and C Wells, *Romano-British cemeteries at Cirencester,* Cirencester Excavations **2**, Cirencester

Wilson, B, Grigson, C, Payne, S (eds), 1982 *Ageing and sexing animal bones from archaeological sites*, BAR Brit Ser **109**, Oxford

Wilson, D E, and Reeder, D M, 2005 *Mammal species of the world. A taxonomic and geographic reference*, 3rd edn, Johns Hopkins University Press, Baltimore

Workshop of European Anthropologists, 1980 Recommendations for age and sex diagnoses of skeletons, *Journal of Human Evolution* **9**, 517–49

Wright, E, Tecce, S, and Albarella, U, 2019 The use of animals at Roman roadside settlements in Britain: contextualizing some new results from Ware, Hertfordshire, *Oxford J Archaeol* **38**, 343–76, doi:10.1111/ojoa.12174

Young, C J, 1977 *The Roman pottery industry of the Oxford region,* BAR Brit Ser **43**, Oxford

APPENDIX D SITE SUMMARY DETAILS

Site name:	Farm Lane, Shurdington, Gloucestershire
Site code:	SHU15 and SHU17
Grid Reference	SO 9357 1945
Type:	Excavation
Date and duration:	7/4/2015 to 11/8/2017
Area of site	The excavation areas totaled 4.5ha and the watching brief areas 0.8ha
Location of archive:	The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Cheltenham Museum and Art Gallery in due course, under the following accession number: CAGM:2015.4.
Summary of results:	Excavations on land west of Farm Lane, Shurdington, Gloucestershire, uncovered evidence for a small Neolithic/early Bronze Age flint scatter and an agricultural landscape that was in use from the middle to late Iron Age until the end of the 2nd century AD. During the Iron Age the settlement was focused on a triangular enclosure that contained at least one roundhouse and a four-post structure, as well as an area of possible open settlement or livestock pens. The roundhouse was associated with radiocarbon dates of 370–160 and 200–40 cal BC. The Iron Age settlement appears to have been predominantly pastoral, exploiting the wet grassland of the clay vale, with an economy based on sheep with a smaller number of cattle and an unusually large number of pigs, but no evidence for cultivation of crops, though plant remains may simply not have been deposited in locations that rendered them archaeologically recoverable. The Iron Age settlement was replaced during the second half of the 1st century AD by a much more extensive, polyfocal arrangement of enclosures, representing a significant increase in agricultural production that included arable and an increase in cattle and horses at the expense of sheep/goats and pigs. The location of the former enclosure remained the site of domestic occupation, now within a square enclosure, although no buildings were identified. A second domestic focus was identified from an artefactual concentration within an enclosure complex that extended beyond the western limit of the site, where evidence for crop processing and an oven or kiln of possible industrial function were located in association with a post-built building. The settlement was abandoned around the turn of the 2nd and 3rd

centuries, perhaps due to the development of a possible villa at Brizen Playing Fields a short distance to the west. Thereafter a continued Roman presence on the site was indicated only by a small number of (mostly unstratified) artefacts.

A total of seven inhumation burials and two cremation burials were found, several of which were situated within or close to a 2nd century enclosure that may have had a funerary function.

Of particular note among the artefactual material were a very rare silver coin of the Dobunnic ruler Eisu and an irregular denarius of Titus bearing a hitherto unattested legend.

Field boundary ditches and a corn-drying oven dating from the mid 11th to mid 13th centuries were probably associated with the medieval settlement that preceded the adjacent Brizen Farm, and ridge and furrow cultivation was also in evidence.

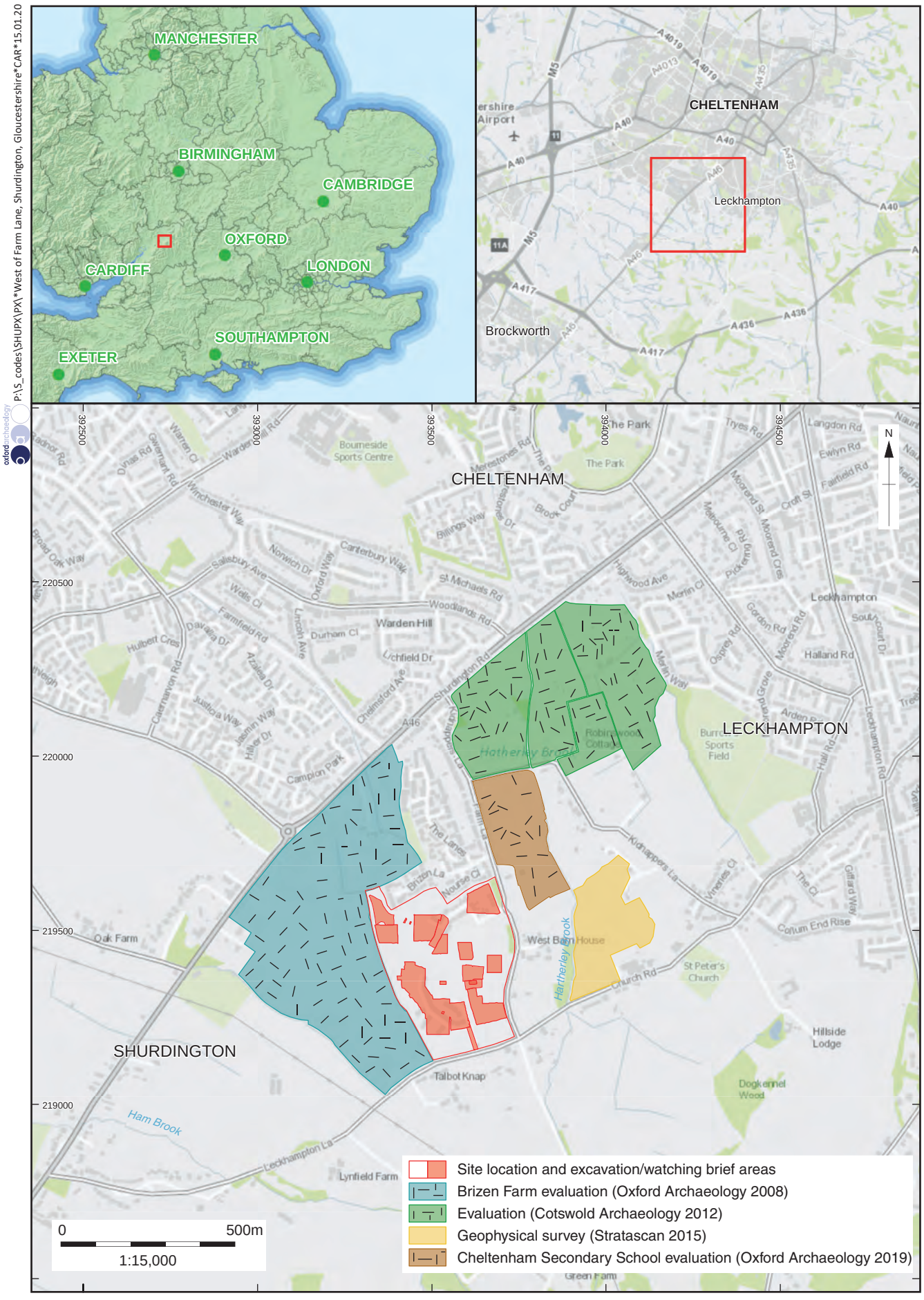


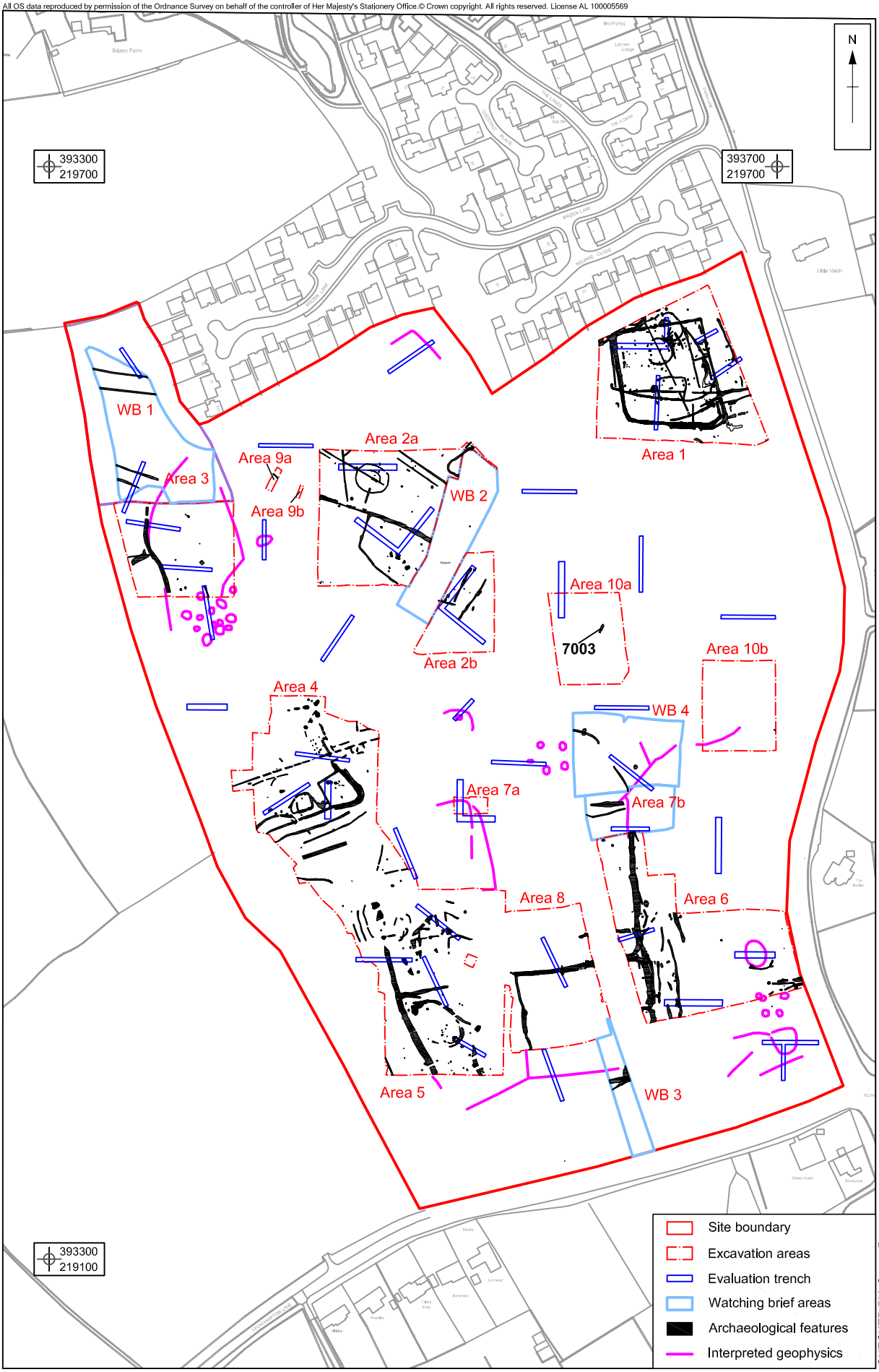
Figure 1: Site location

Figure 2: View south-east across Area 5 toward Leckhampton Hill

X:\I\Leckhampton_Farm Lane_Gloucestershire\010Geomatics\02 CAD\SHUEX_Farm_Lane_Leckhampton_PX_2020_02_07.dwg(A4PX_Fig3)*SHU15*SHUEX*Farm Lane, Leckhampton*aidan.farnan* 10 Feb 2020

CHECKED BY:Conan Parsons

Figure 3: Geophysical survey results



X:\ILeckhampton_Farm Lane_Gloucestershire\010Geomatics\02 CAD\SHUEX_Farm_Lane_Leckhampton_PX_2020_02_07.dwg(A4PX_Fig4)*SHU15*SHUEX*Farm Lane, Leckhampton*aidan.farnan* 10 Feb 2020

CHECKED BY: Conan Parsons

Figure 4: Plan of excavation areas

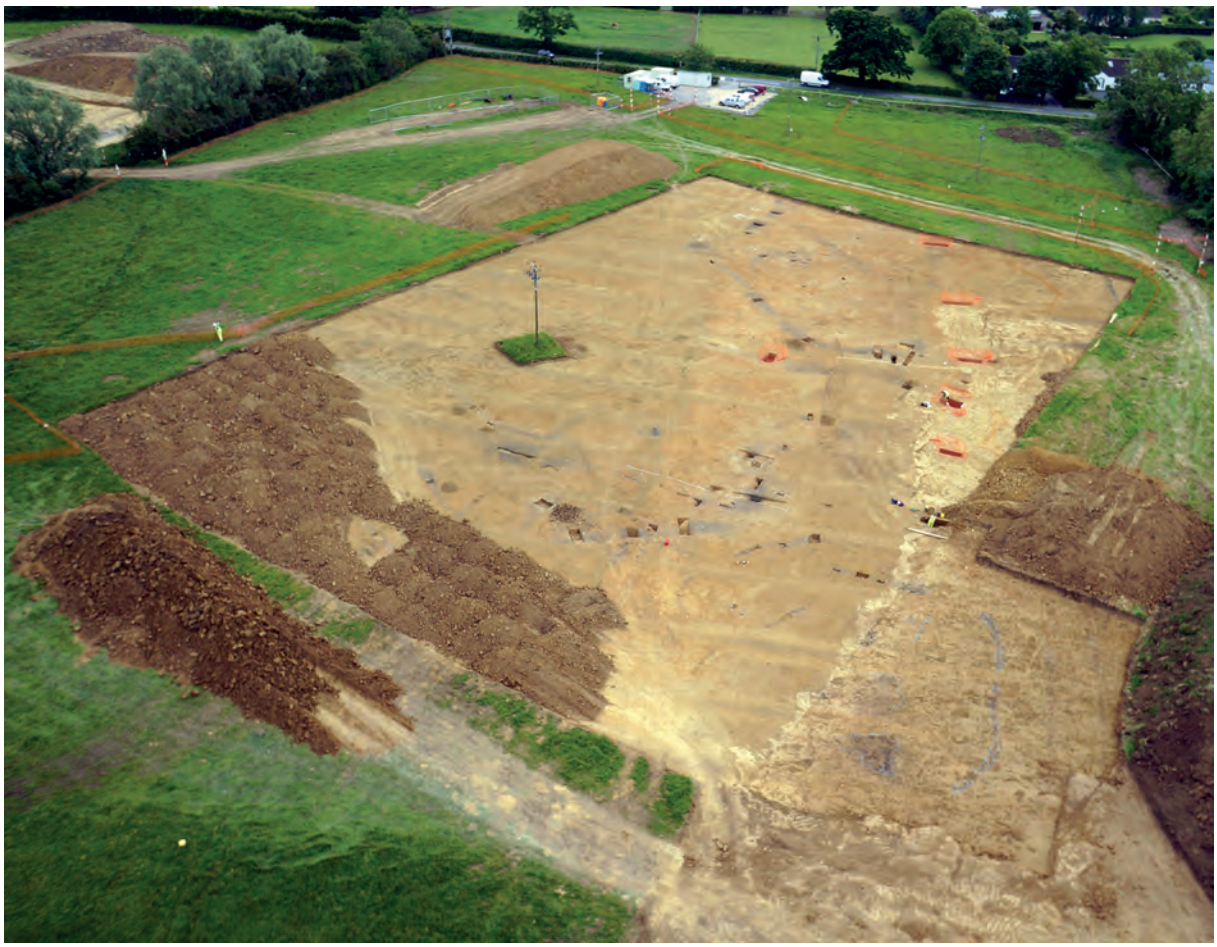
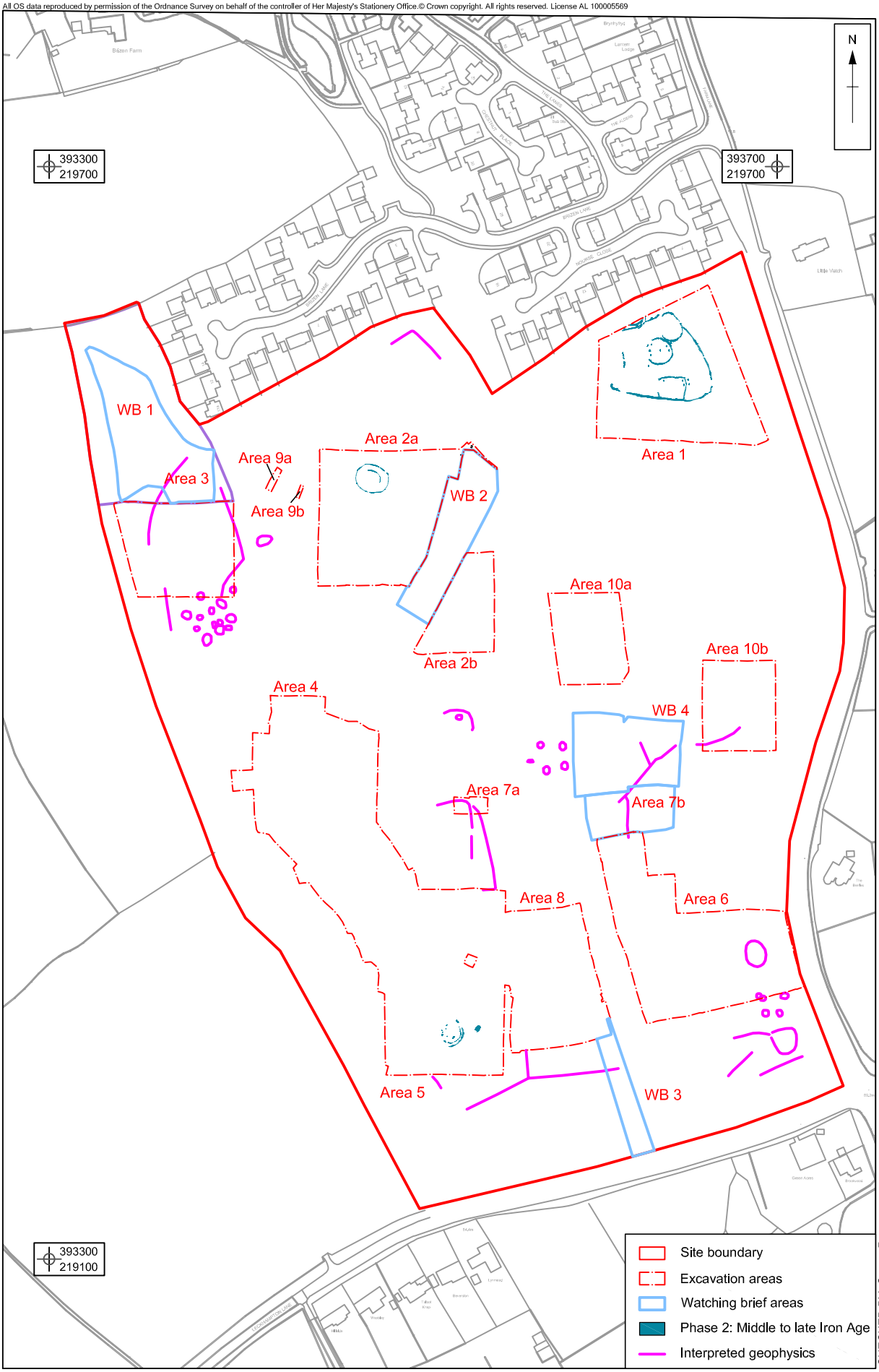


Figure 5: Area 5, viewed from the north

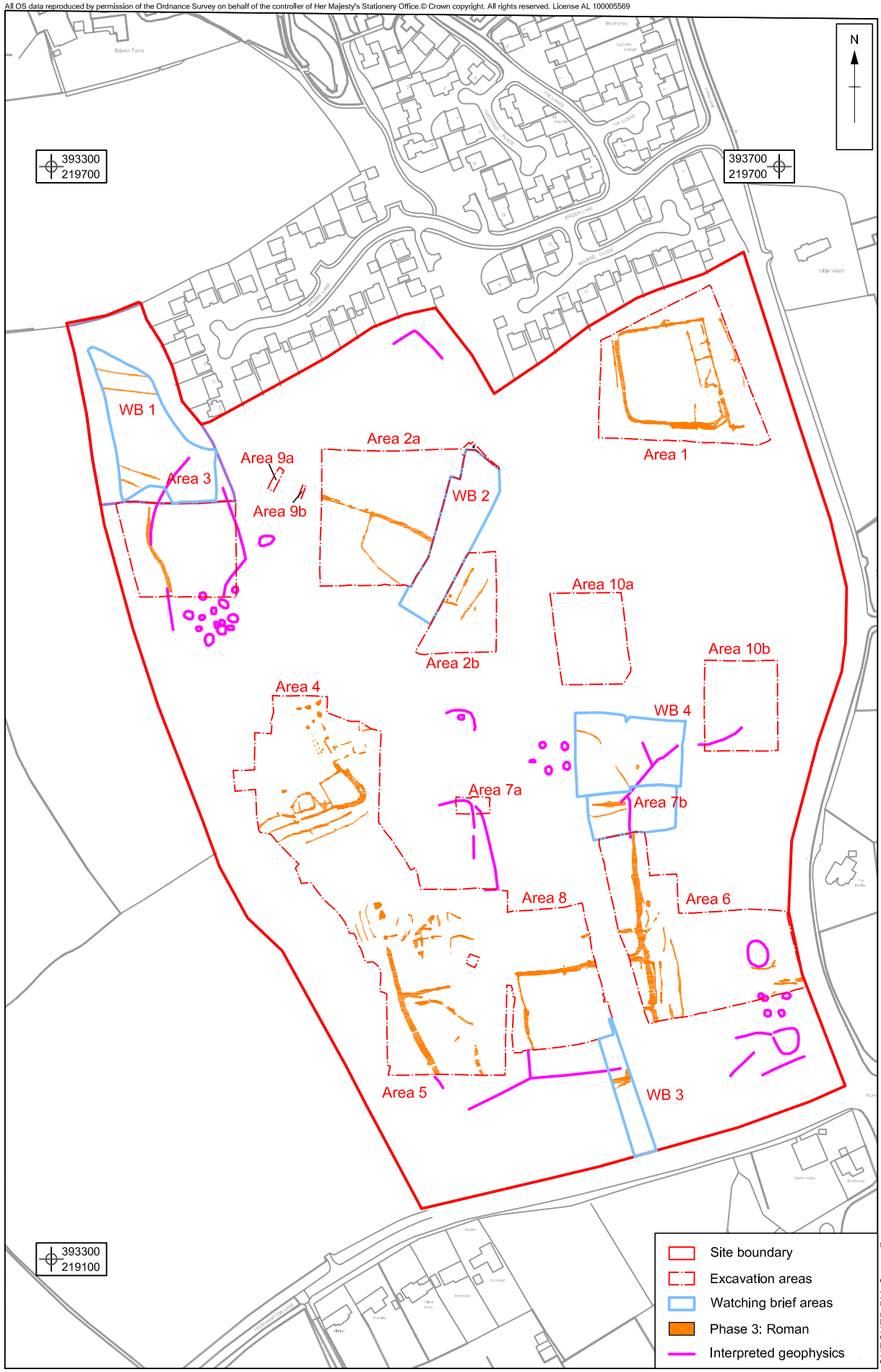
Figure 6: Roman settlement features in Area 5 visible as dark soil marks. The dashed white lines mark the locations of medieval plough furrows



\\10.0.10.86\projects\\Leckhampton_Farm Lane_Gloucestershire\010Geomatics\02 CAD\SHUEX_Farm Lane_Leckhampton_PX_2020_02_07.dwg(A4PX_Fig7)*SHU15*SHUEX*Farm Lane, Leckhampton*aidan.farnan* 11 Feb 2020

CHECKED BY: Conan Parsons

Figure 7: Overall plan of all Phase 2 (middle to late Iron Age) features



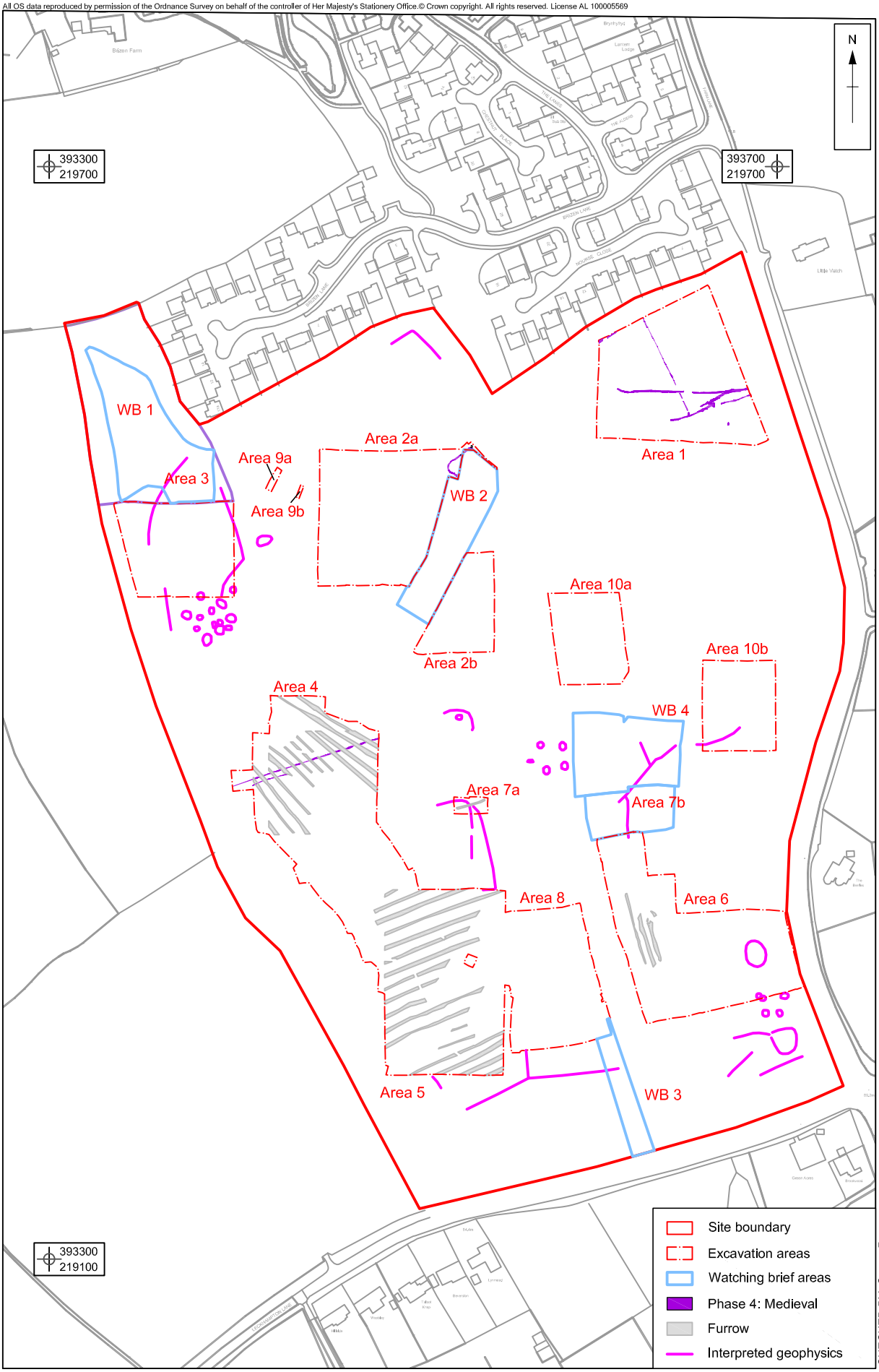
0 100 m

Scale at A4 1:3000

Figure 8: Overall plan of all Phase 3 (Roman) features

\\10.0.10.86\projects\\Leckhampton_Farm Lane_Gloucestershire\010Geomatics\02 CAD\SHUEX_Farm_Lane_Leckhampton_PX_2020_02_07.dwg(A4PX_Fig8)*SHU15*SHUEX*Farm Lane, Leckhampton*aidan.farnan* 11 Feb 2020

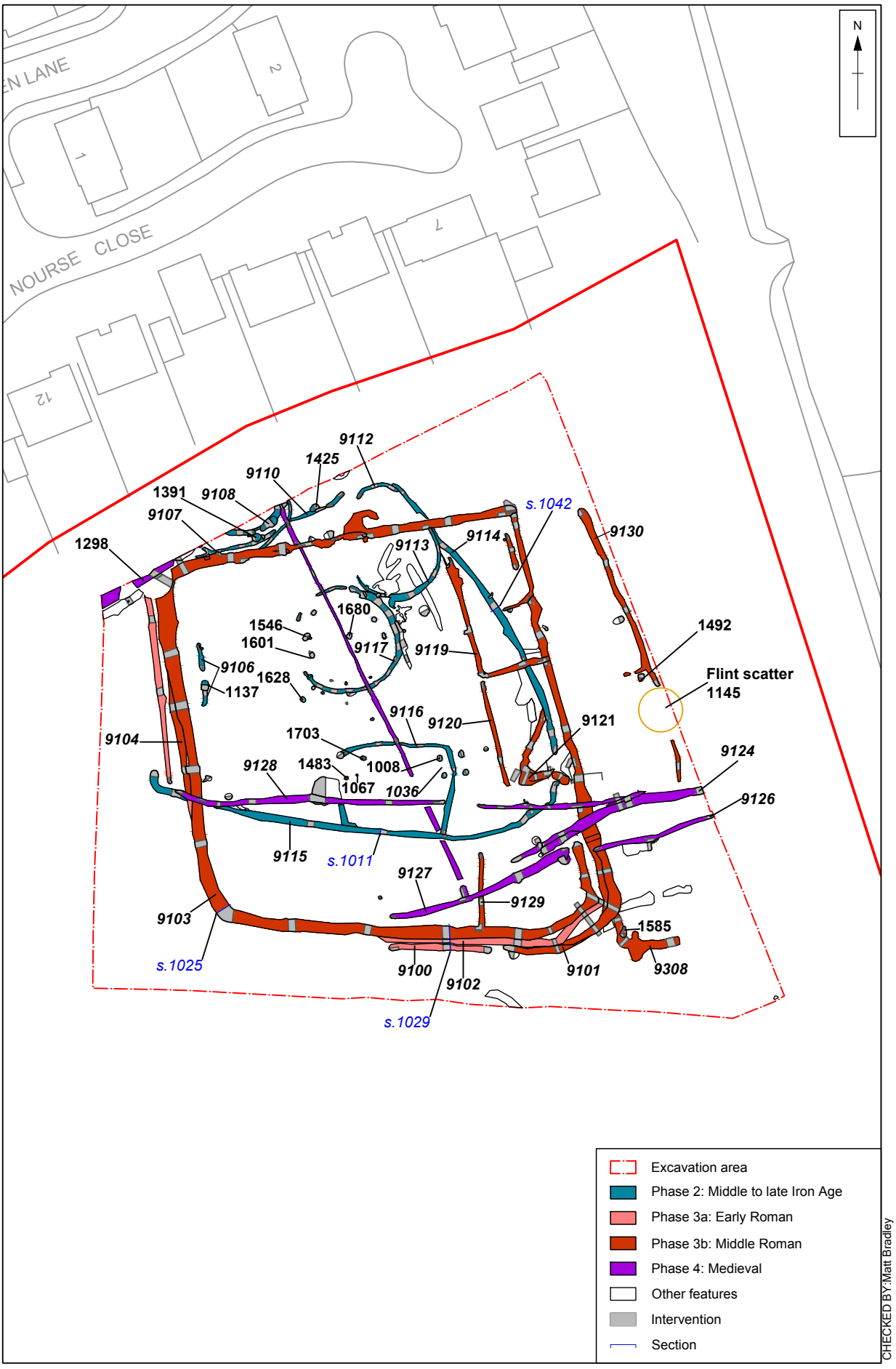
CHECKED BY: Conan Parsons



\\10.0.10.86\projects\\Leckhampton_Farm Lane_Gloucestershire\010Geomatics\02 CAD\SHUEX_Farm_Lane_Leckhampton_PX_2020_02_07.dwg(A4PX_Fig9)*SHU15*SHUEX*Farm Lane, Leckhampton*aidan.farnan* 11 Feb 2020

CHECKED BY: Conan Parsons

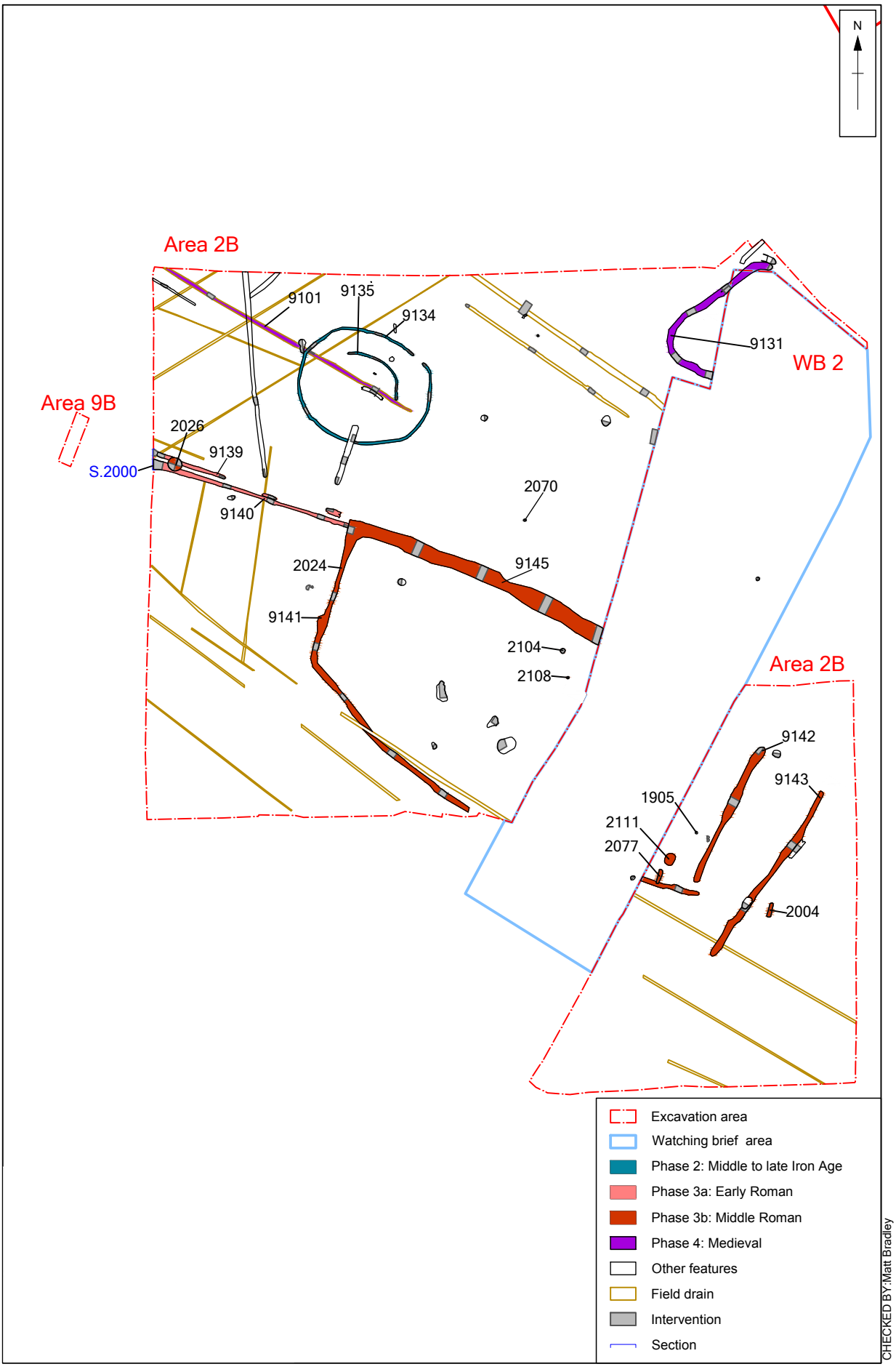
Figure 9: Overall plan of all Phase 4 (medieval) features



X:\1Leckhampton_Farm Lane_Gloucestershire\010Geomatics\02 CAD\SHUEX_Farm_Lane_Leckhampton_PX_2021-01-26a.dwg(A4PX_Fig10New)*SHU15*SHUEX*Farm Lane, Leckhampton*aidan.faman* 26 Jan 2021

CHECKED BY:Matt Bradley

Figure 10: Area 1 phase plan



X:\1Leckhampton_Farm Lane_Gloucestershire\010Geomatics\02 CAD\SHUEX_Farm_Lane_Leckhampton_PX_2021-01-26a.dwg(A4PX_Fig5New)*SHU15*SHUEX*Farm Lane, Leckhampton*aidan.farnan* 26 Jan 2021

Figure 11: Area 2 phase plan

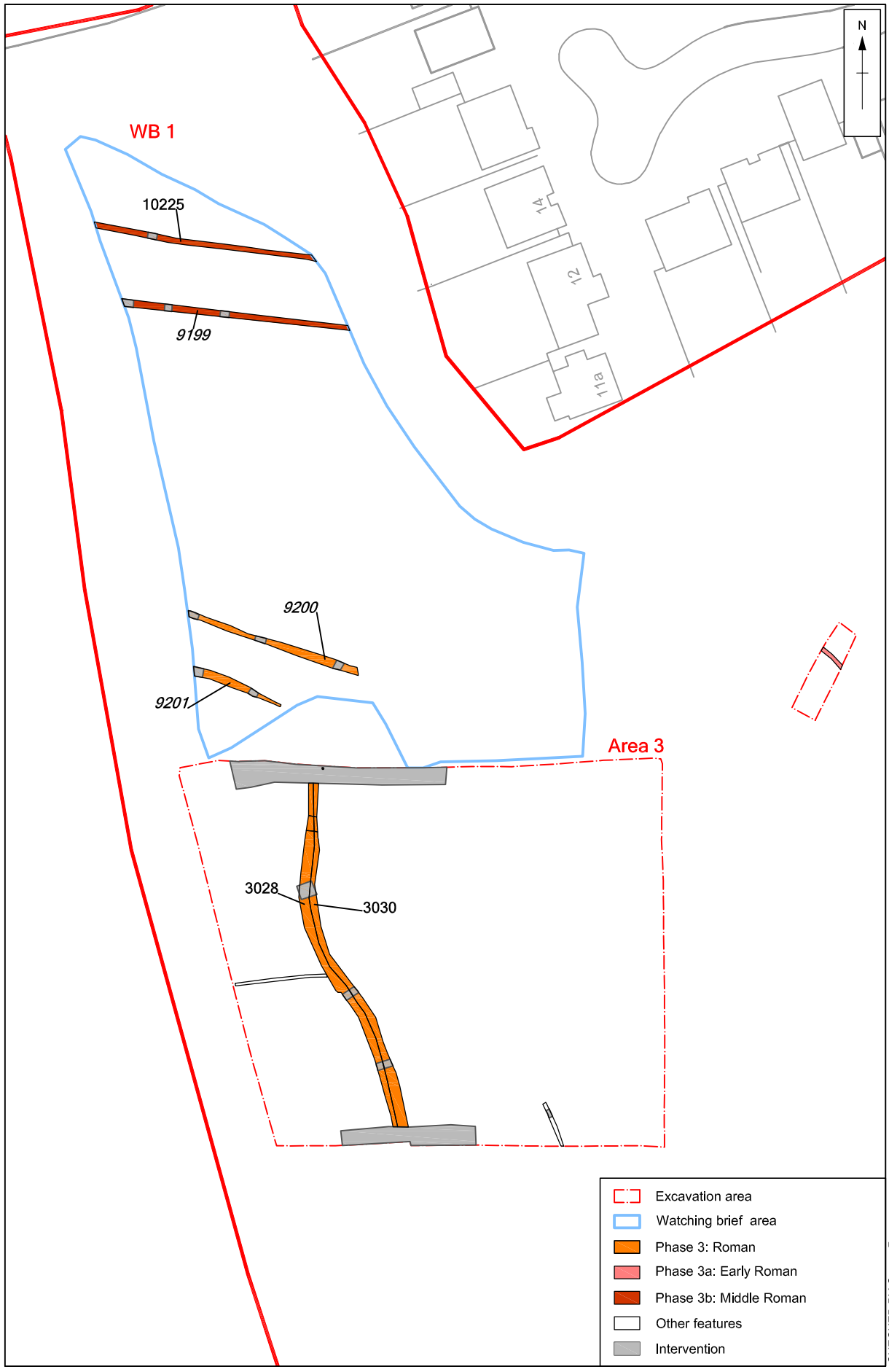


Figure 12: Area 3 phase plan

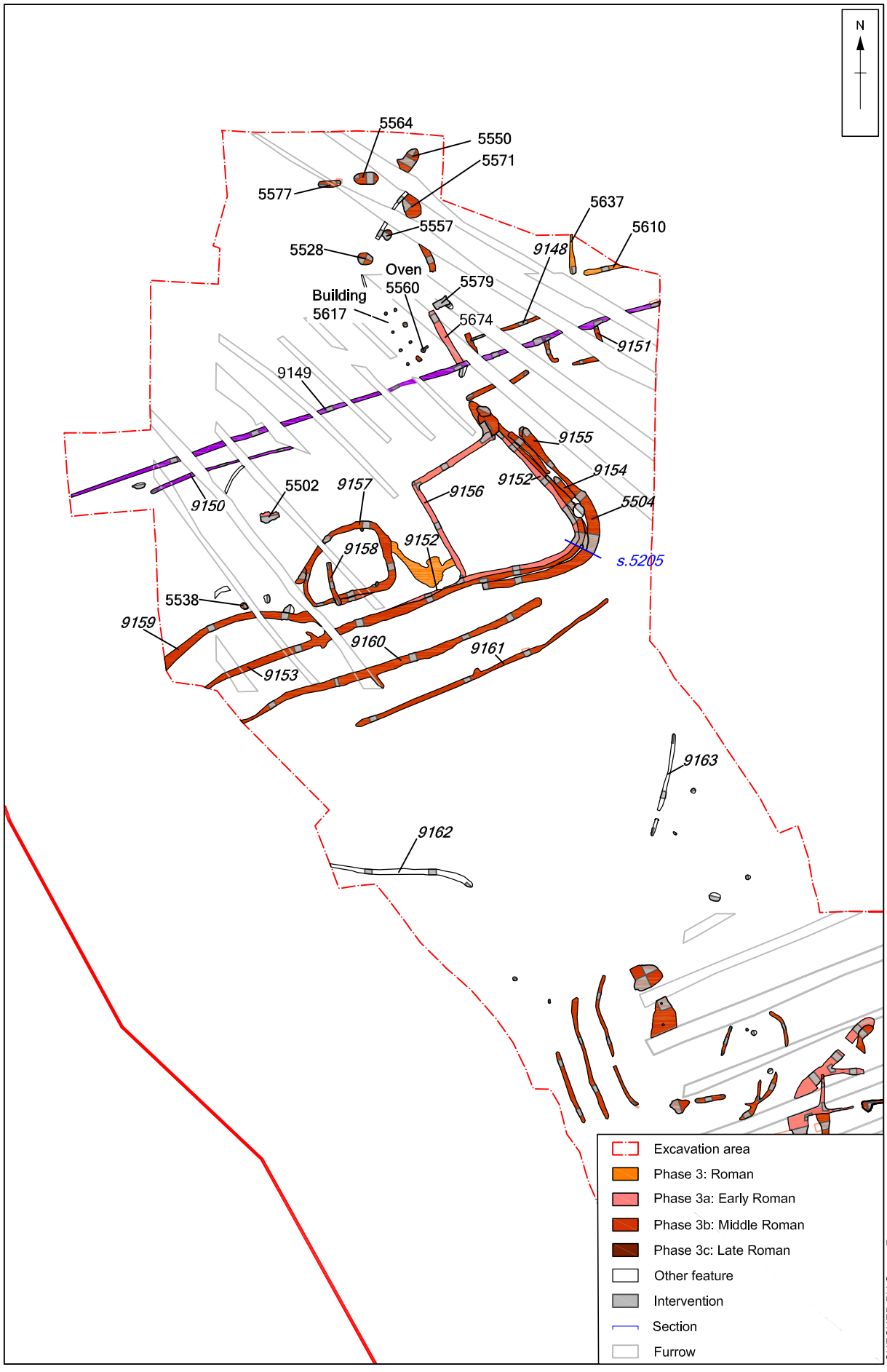


Figure 13: Area 4 phase plan

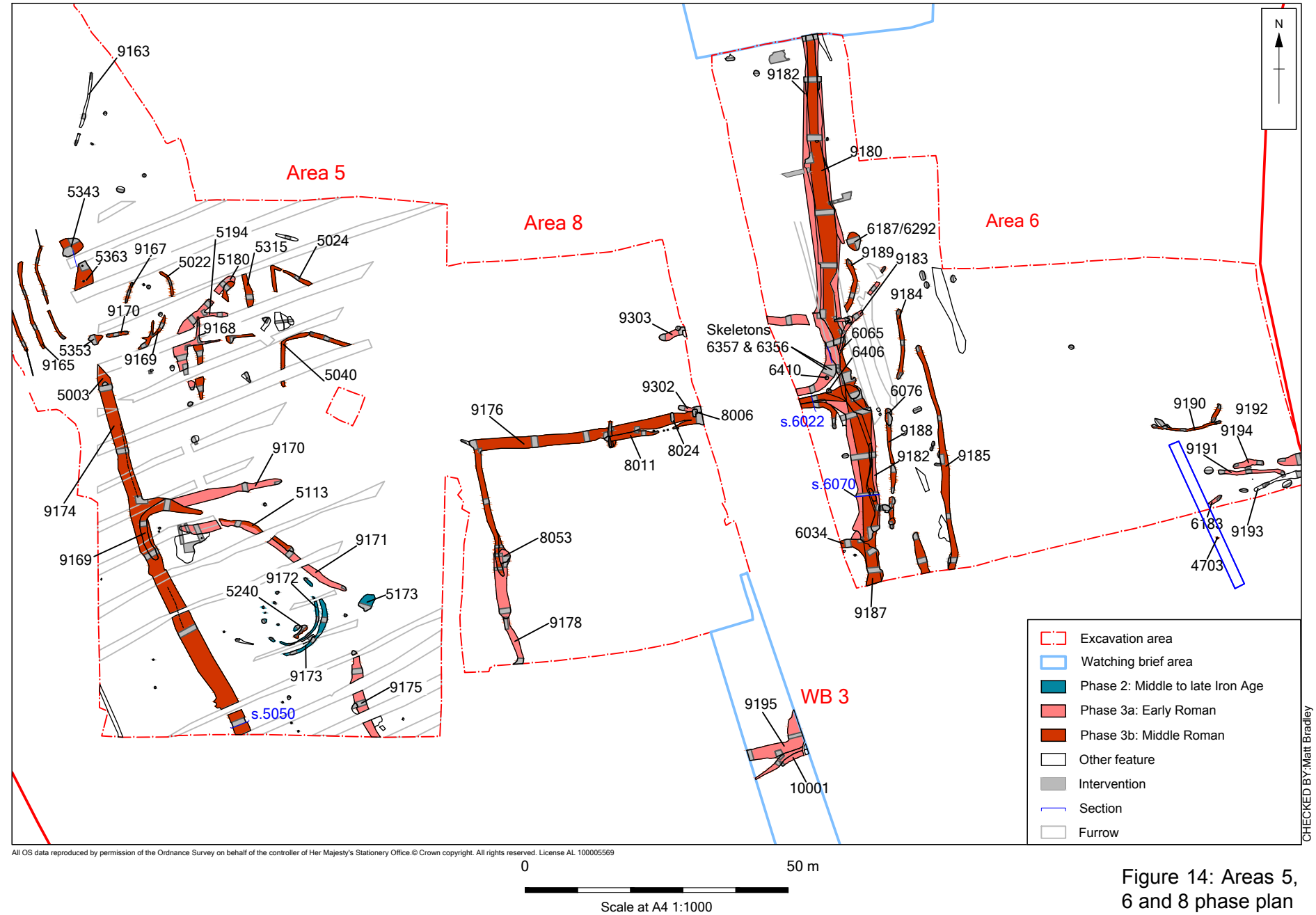


Figure 14: Areas 5, 6 and 8 phase plan

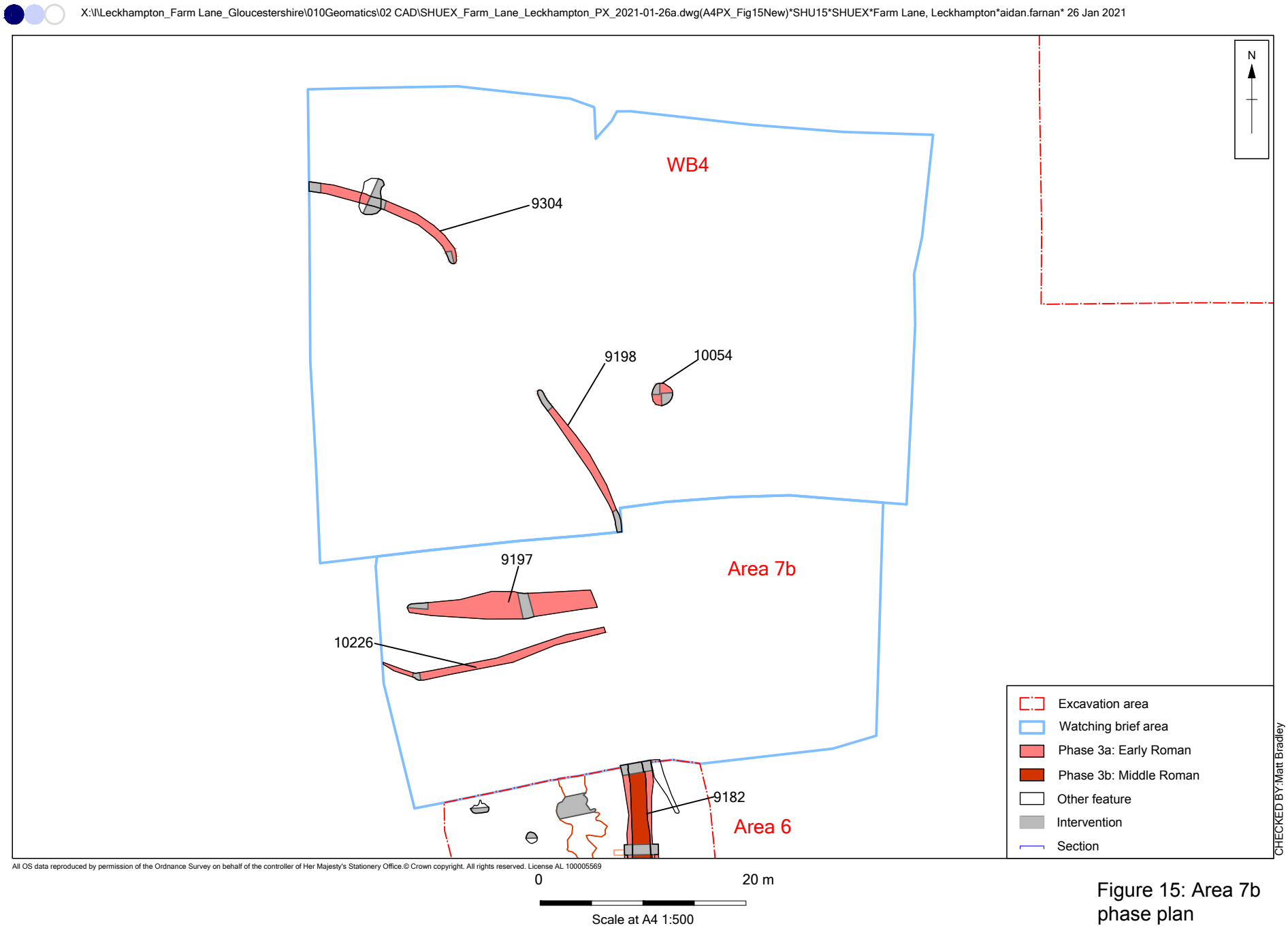


Figure 15: Area 7b phase plan

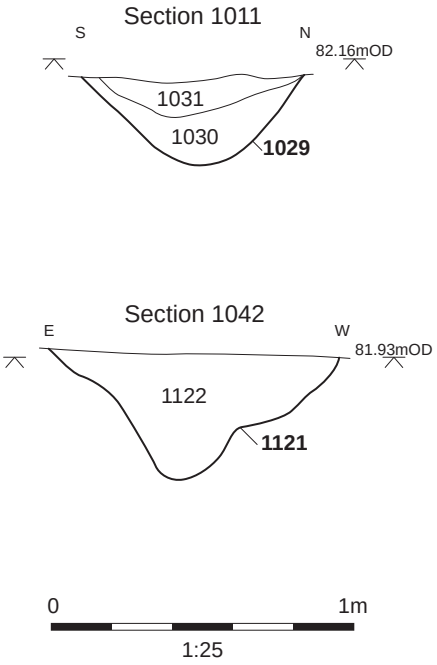


Figure 16: Sections through late Iron Age enclosure ditch 9114/9115

Figure 17: Roundhouse 9177 during excavation

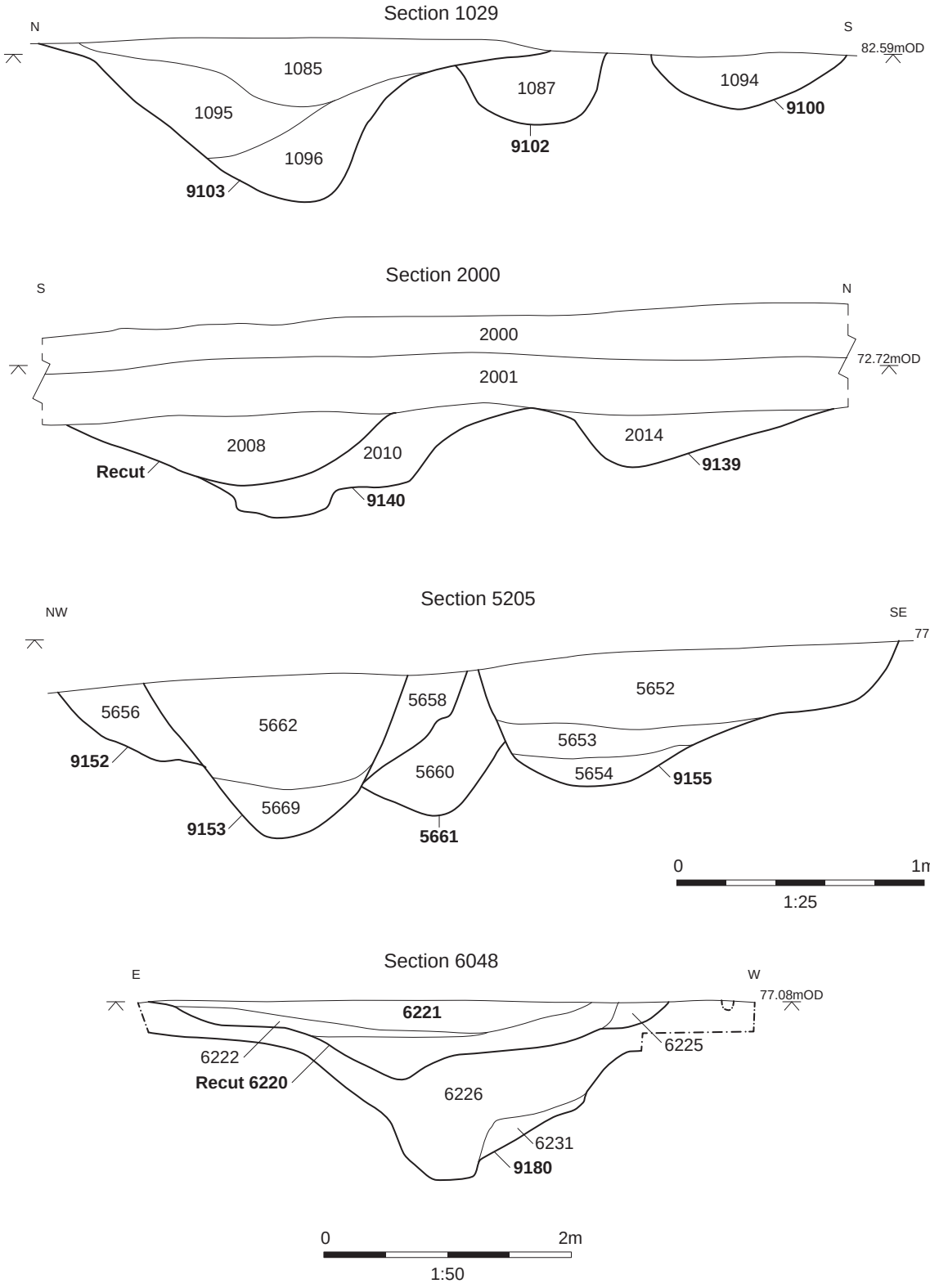


Figure 18: Sections through selected early Roman features

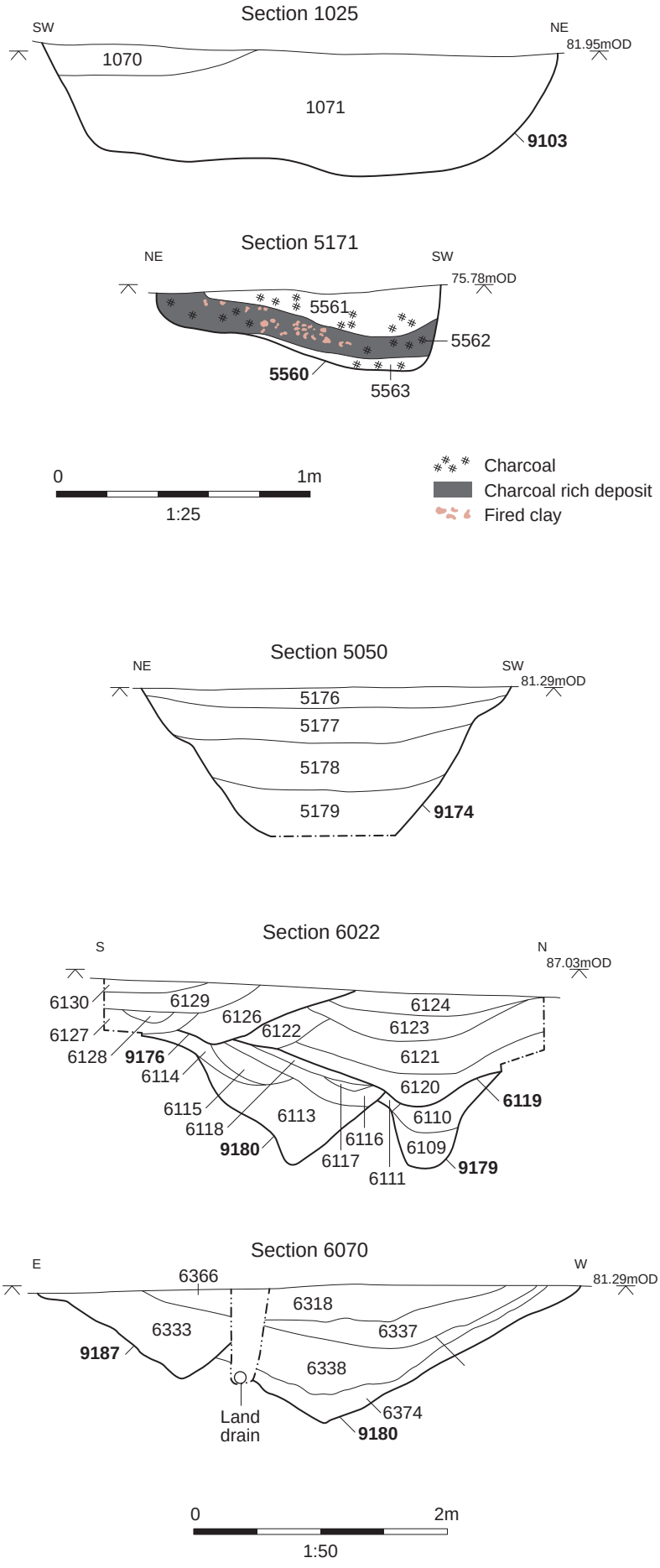


Figure 19: Sections through selected middle Roman features

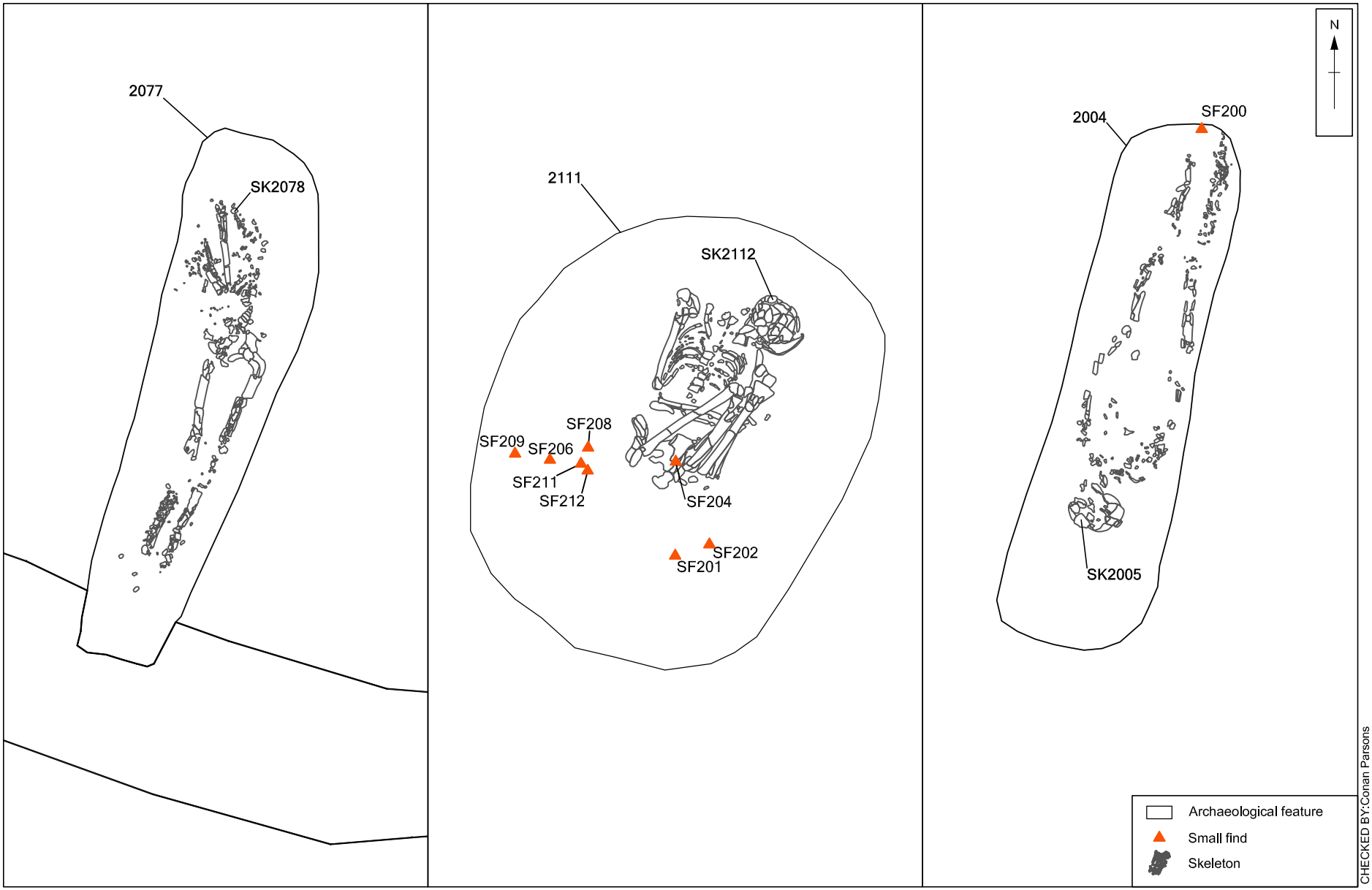


Figure 20: Plans of burials 2004, 2077 and 2111, associated with the Area 2 enclosure

Figure 21: Grave 2111, view to north-east, scale 0.5m

Figure 22: Pot SF 205 in pit 2104, view to south-west, scale 0.5m

Figure 23: Pot SF 2107 in pit 2108, view to south-east, scale 0.2m

Figure 24: Oven 5560 in Area 4, view to south-west, scale 0.5m

Figure 25: Burials 6356 and 6357 during excavation

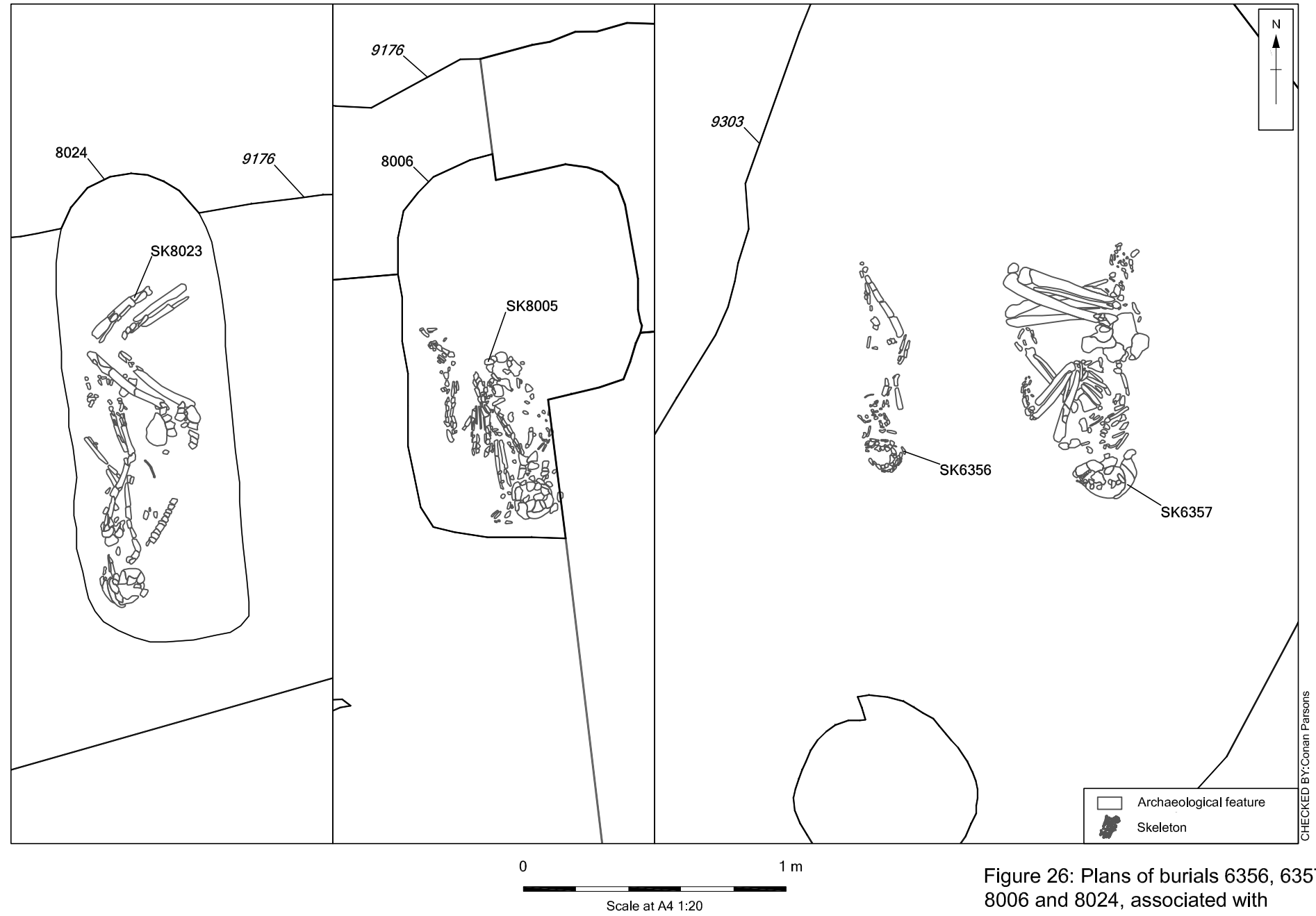


Figure 26: Plans of burials 6356, 6357, 8006 and 8024, associated with enclosure boundaries in area 6 and 8

Figure 27: Oven 1585, view to north-east, scale 1m

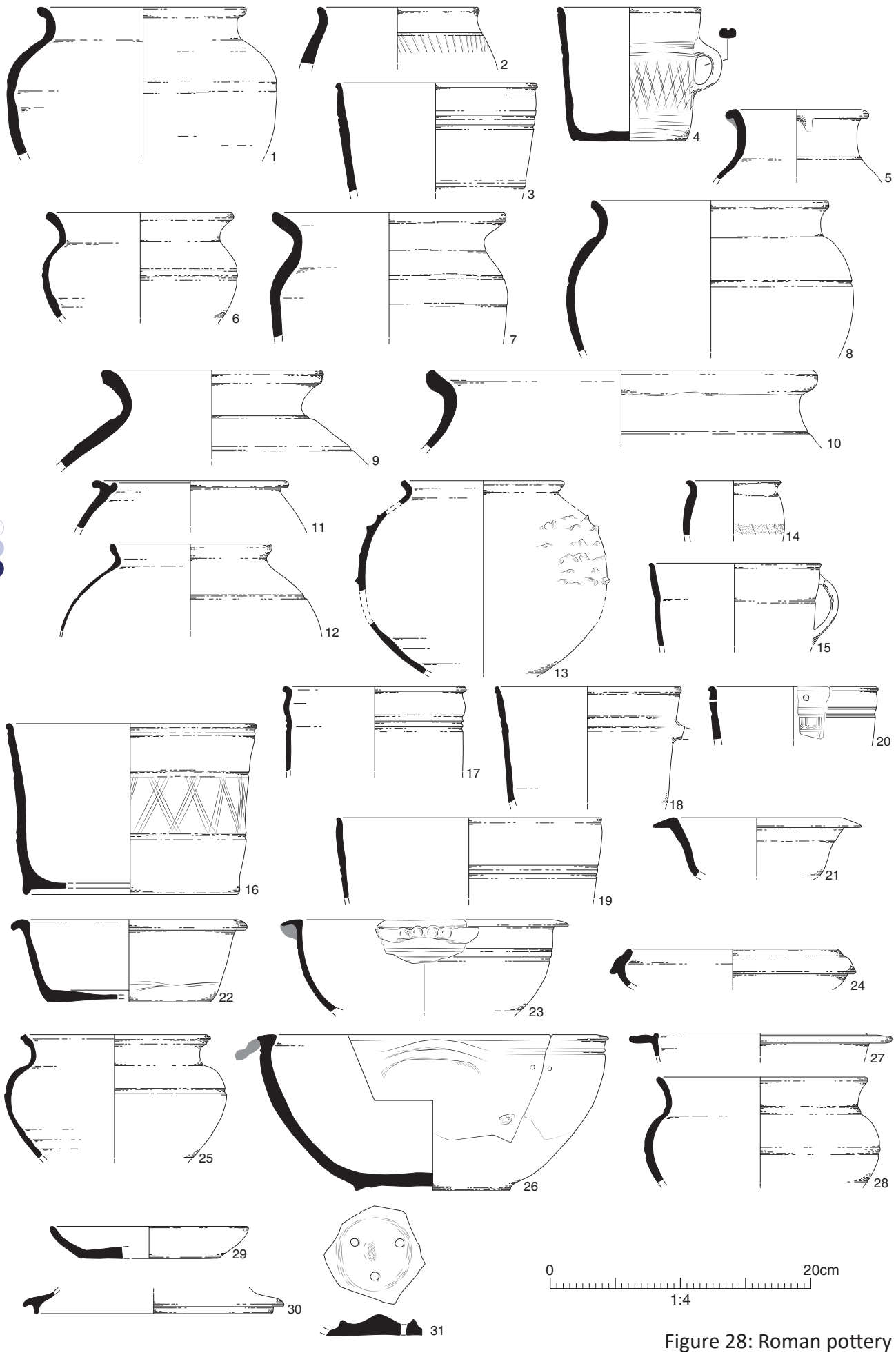


Figure 28: Roman pottery

Figure 29: Coins. 1. Silver coin of the Dobunnic ruler Eisu (SF 801)
2. Plated denarius of Titus (SF 225) with fragmentary (anti-clockwise) obverse legend C]AES TITVS A(?)[

Figure 30: Brooches

Figure 31: Other metal objects and spindle whorl

Figure 32: Querns

Figure 33: Other worked stone objects

Figure 34: Fired clay objects

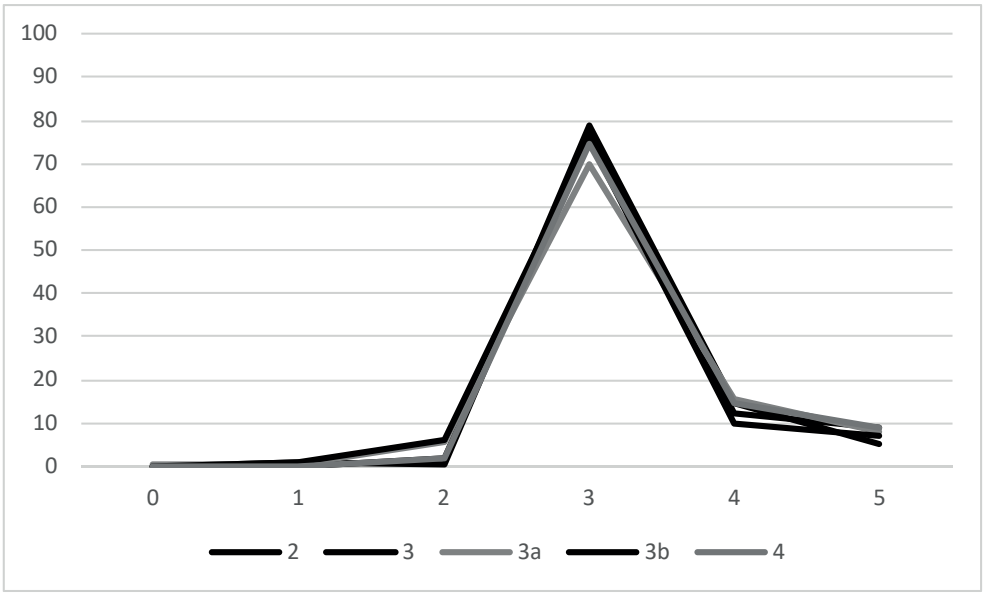


Figure 35: Condition of animal bone specimens for phases containing more than 500 specimens, expressed as a percentage of the NSP from that phase

Figure 36: Percentage of animal bone NISP by phase for the principal domesticates

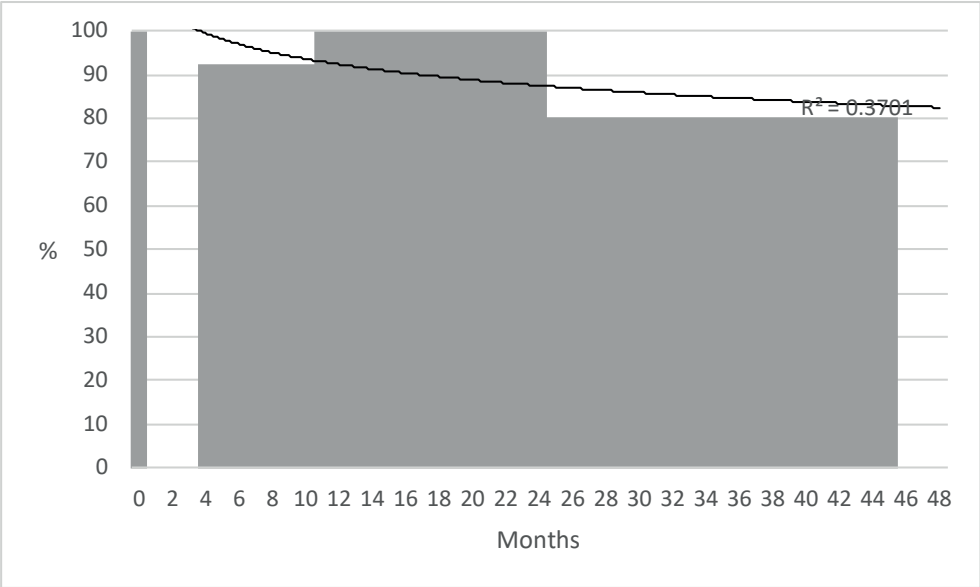


Figure 37: Survival data for domestic cattle, based on epiphyseal fusion, for Phase 3b (NSP=42). Bar chart shows percentage of animals alive (fused specimens), with regression curve showing trend over time

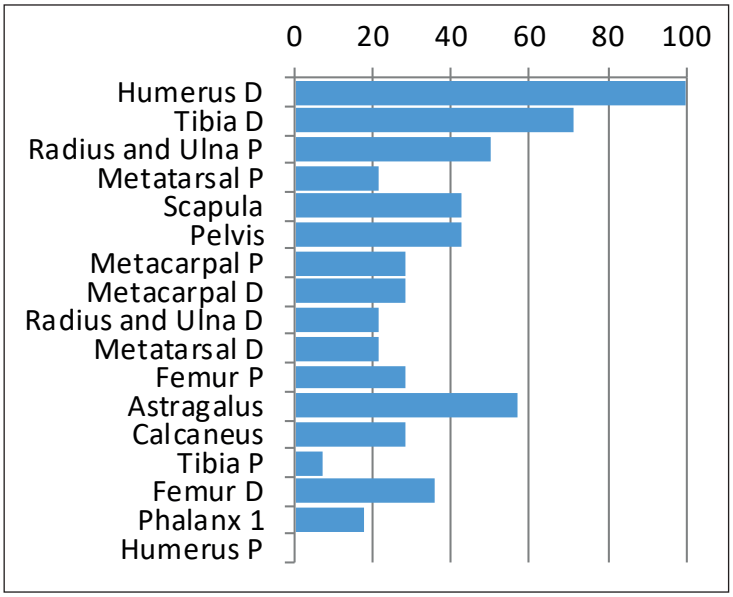


Figure 38: Skeletal part abundance for domestic cattle, all Phase 3 (incl. 3a, 3b and 3c) (NSP=94)

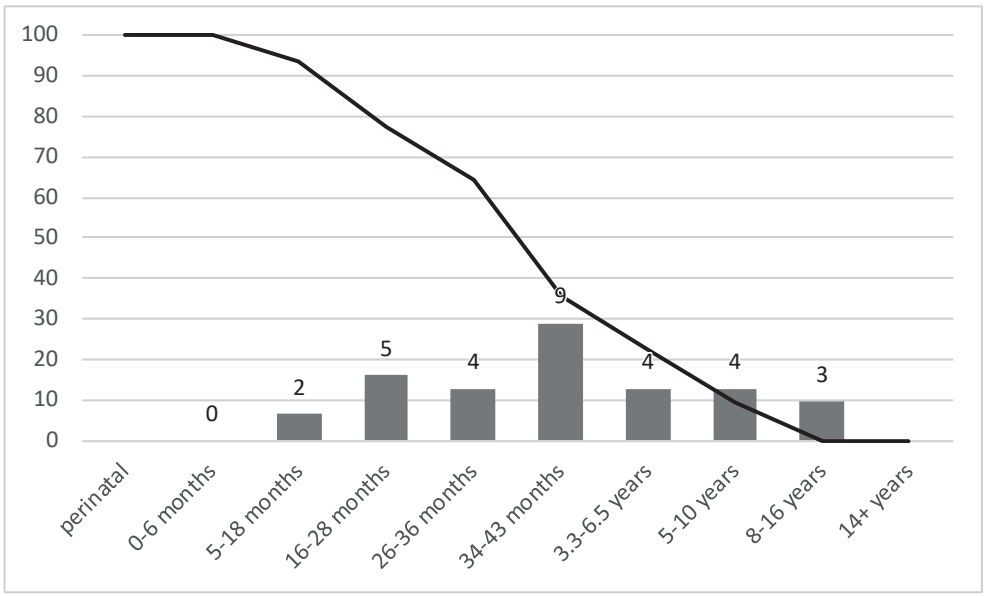


Figure 39: Survival data for domestic cattle, based on mandibular tooth wear data, for Phases 3a and 3b combined (NSP=31)

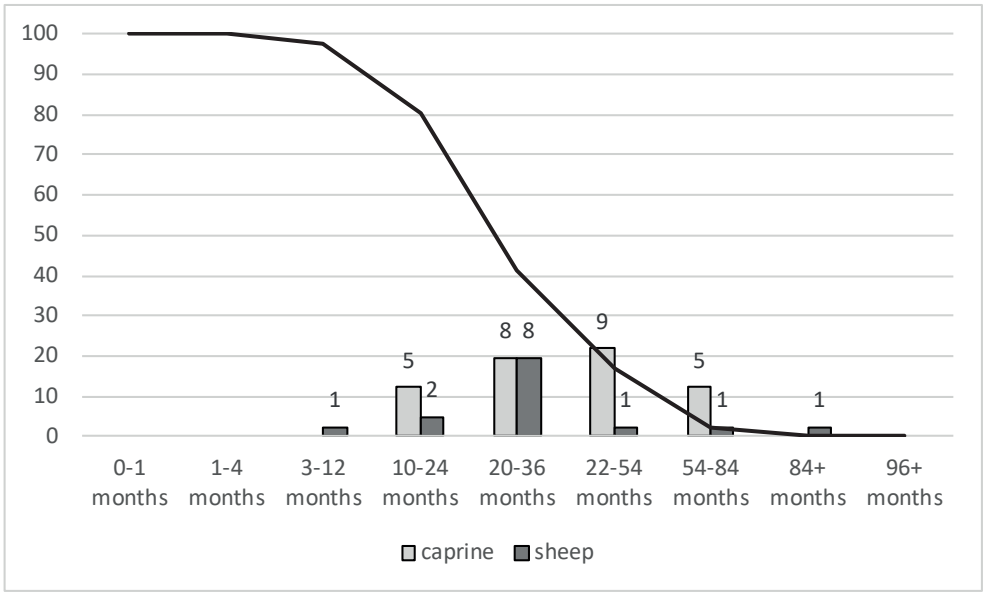


Figure 40: Survival data for caprines, based on mandibular tooth wear data, for Phases 3a and 3b combined (NSP=41)

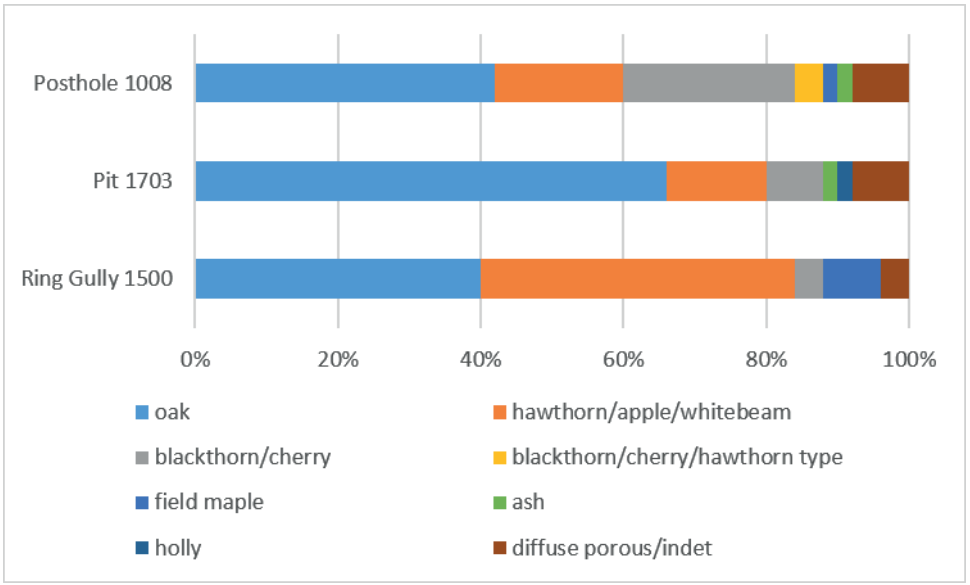


Figure 41: Relative proportions of wood taxa from Iron Age ring gully, pit and posthole

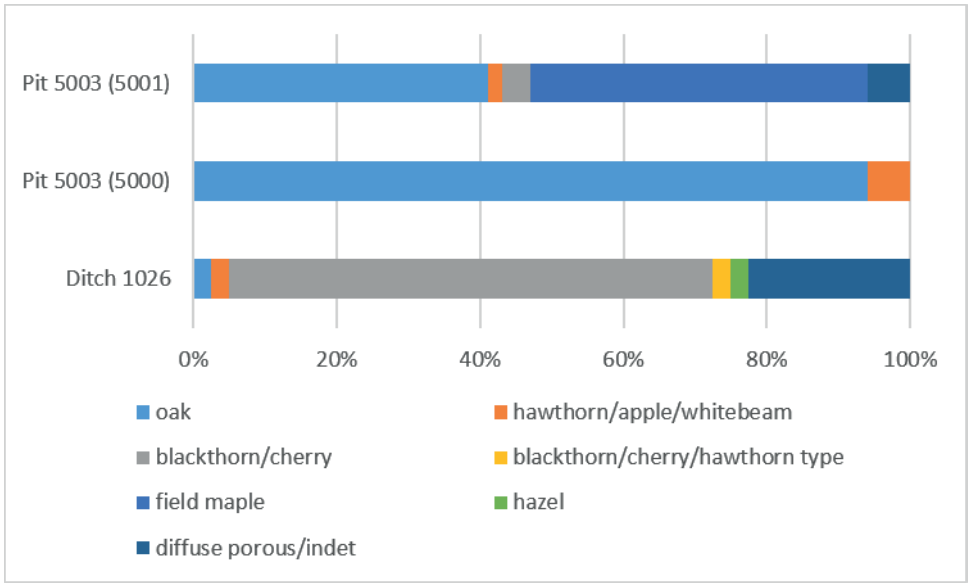


Figure 42: Relative proportions of wood taxa from samples taken from mid-Roman oven 5560

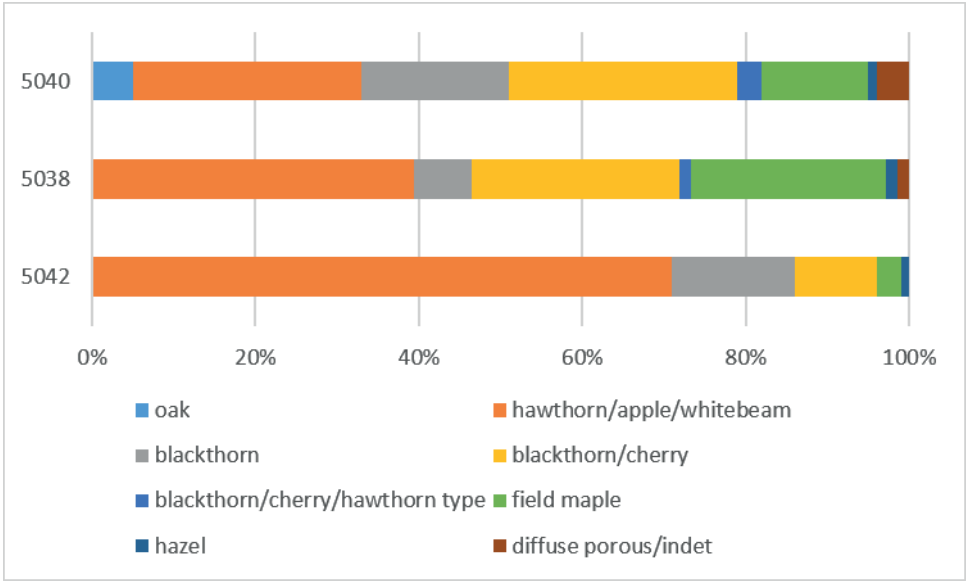


Figure 43: Relative proportions of wood taxa from Roman pit 5003 (sample 5001 from upper fill 5006 and sample 5000 from lower fill 5006) and ditch 9128

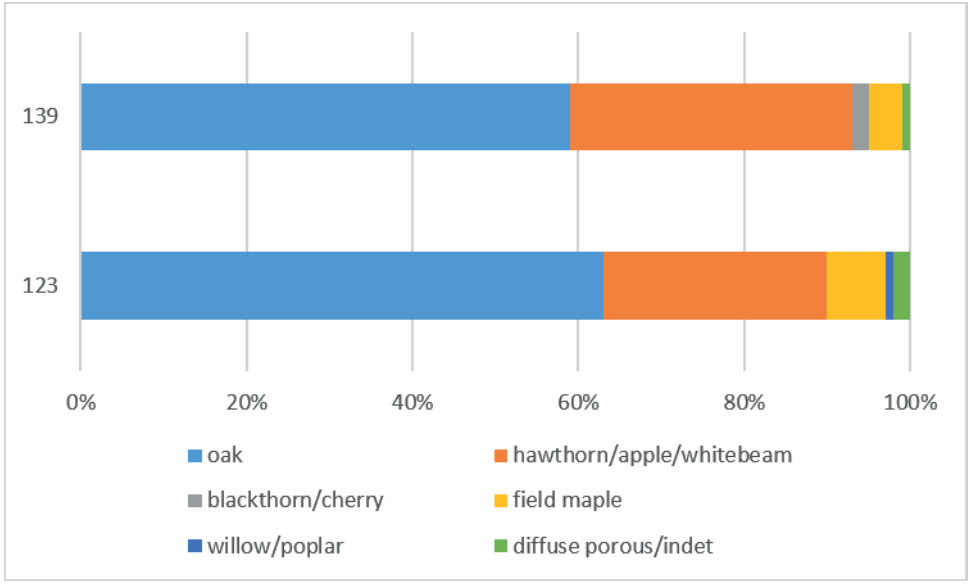


Figure 44: Relative proportions of wood taxa from medieval oven 1585 (samples 123 and 139)

oxfordarchaeology

Head Office/Registered Office/ OA South

Janus House
Osney Mead
Oxford OX2 0ES

t: +44 (0) 1865 263 800
f: +44 (0) 1865 793 496
e: info@oxfordarchaeology.com
w: http://oxfordarchaeology.com

OA North

Mill 3
Moor Lane
Lancaster LA1 1QD

t: +44 (0) 1524 541 000
f: +44 (0) 1524 848 606
e: oanorth@oxfordarchaeology.com
w: http://oxfordarchaeology.com

OA East

15 Trafalgar Way
Bar Hill
Cambridgeshire
CB23 8SQ

t: +44 (0) 1223 850500
e: oaeast@oxfordarchaeology.com
w: http://oxfordarchaeology.com