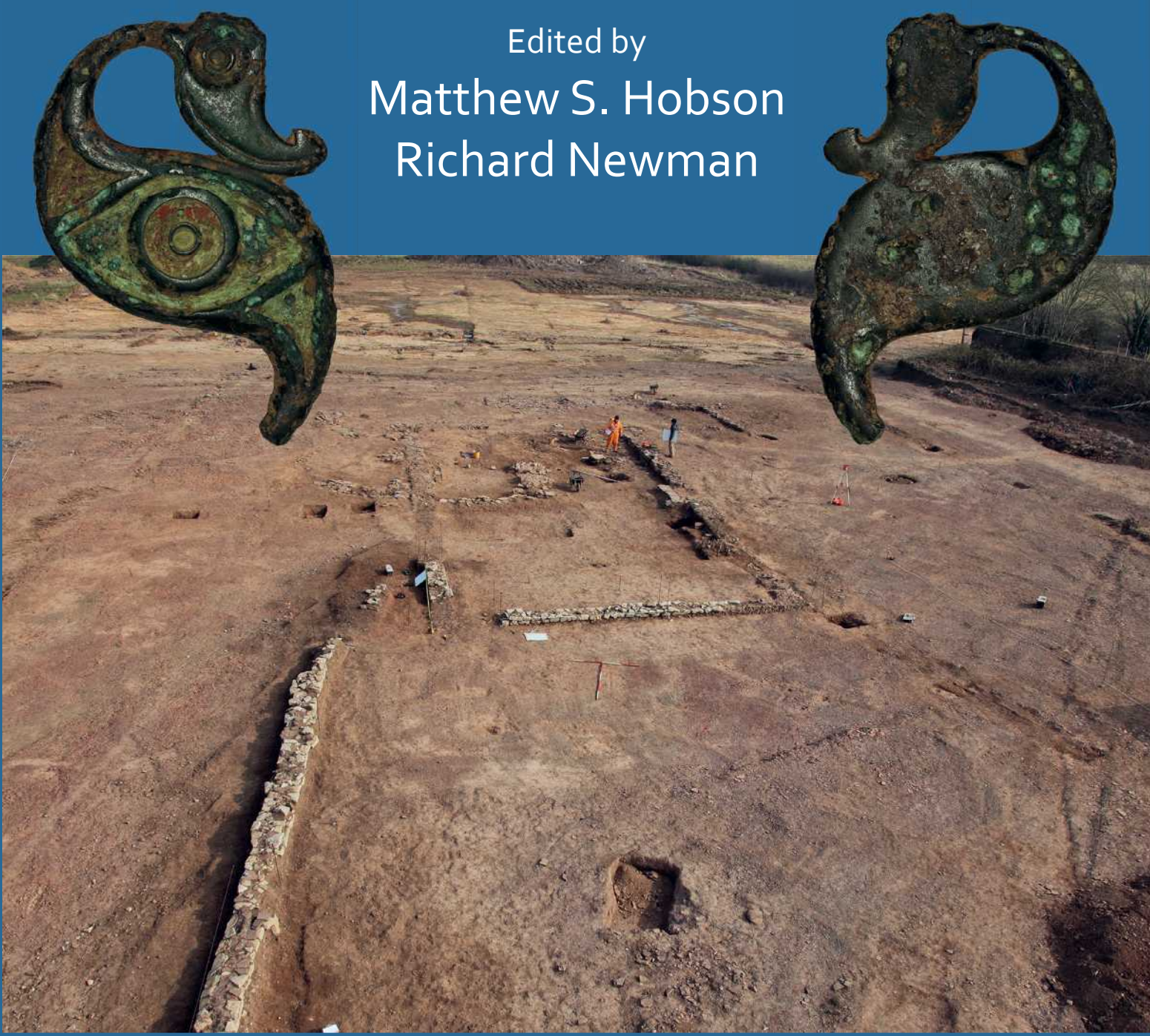
Lyde Green Roman Villa, Emersons Green, South Gloucestershire

Edited by
Matthew S. Hobson
Richard Newman



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With contributions from

Adrian Bailey, Damion Churchill, Kimberley Colman, Lynne Gardiner, Frank Giecco, Richard Henry, David Jackson, Gerry McDonnell, Mike McElligott, Ed R. McSloy, Gwladys Monteil, Don O'Meara, Philip Mills, Megan Stoakley, David Williams, Imogen Wood, and Robert Young

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Reconstruction painting of Lyde Green Roman Villa by Kevin Horsley

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The project was managed at various stages by Frank Giecco, Richard Newman and David Jackson.

Editors' foreword

Matthew Hobson joined Wardell Armstrong in the position of Associate Director at the Carlisle office, following a post at the University of Leicester, in early March 2020. Shortly after his arrival Matthew received instruction to bring the partly completed Lyde Green monograph to final publication. A draft text, minus some specialist reports and a concluding discussion, was prepared by Richard Newman by spring 2017. Richard then became heavily occupied with the management of a series of excavations related to the East Anglia One windfarm onshore construction works in Suffolk, and subsequently with overseeing the process of resultant post-excavation assessment. This project was only completed in the month before Richard departed Wardell Armstrong. By early 2020 the Lyde Green excavations were becoming a rather distant event in the company's history. Michael McElligott, who prepared the two substantial archive reports in 2014, had by then emigrated to Australia to work as an archaeologist. Initial meetings with Richard, who himself had not taken part in the original excavations, helped greatly developing Matthew's understanding of what remained to be done. Michael McElligott also kindly took the time to answer several queries about the methodology employed during the excavations.

Most of the specialist reports were still in their original form and required editing down and their conclusions cross-referencing with one another. Analysis still needed to be arranged for the Roman small finds and ceramic building material, and the process of conducting the former led to some revisions in the dating. Data for the draft stratigraphic figures was moved from AutoCAD over to GIS, and a rough concordance of the phasing between each of the excavation areas drawn up. From this digital archive, a phase plan for each of the excavation areas was prepared. Helen Philips then produced figures of selected section drawings. Richard Henry photographed a selection of the small finds and Matthew produced figures of the these and the illustrations in Adobe InDesign. Richard Newman completed the text of the final chapter at the beginning of May 2020.

The production of the monograph has been a collective effort. In addition to the team of contributors, multiple anonymous academic peer reviewers kindly submitted comments on the draft text and figures, one of whom read the entire text of an early draft. These comments have helped to iron out many inconsistencies. Inevitably some will remain, but the responsibility for these remains ours.

Matthew S. Hobson and Richard Newman
18/05/2021

Chapter 1

Introduction

Richard Newman, Matthew S. Hobson, and Damion Churchill

The archaeological investigations described in this monograph were undertaken during 2012 and 2013 at Lyde Green on the north-eastern outskirts of Bristol, within what was then the known as the Emersons Green East development area (Figure 1.1). The excavations recorded a 1st century AD farmstead occupying a visually prominent position. The site occupies a low ridge overlooking a stream valley to the east, into which a number of spring lines flow. The farmstead developed into a villa estate by the late 3rd century and continued life well into the second half of the 4th century. The main villa building, complete with remains of a bathhouse and other ancillary structures, was excavated beneath what is now Lyde Green Primary School. The focus of settlement activity in the 1st century, however, originally lay some 200m further south within a D-shape enclosure, which now lies beneath the new residential housing estate built by Linden homes at the junction of Acorn Drive and Willowherb Road. This enclosure was surrounded by field systems probably dedicated to stock raising and arable farming. Traces of its agricultural and non-agricultural production activities, such as corn drying, iron smelting and blacksmithing, were recorded dating to the 2nd to 4th centuries AD. Only a small amount of evidence for earlier activity from the Neolithic, Middle-Late Bronze Age and the Early Iron Age was found, and does not indicate the close proximity of dense sedentary settlement before the 1st century AD. The site had suffered badly from medieval and later

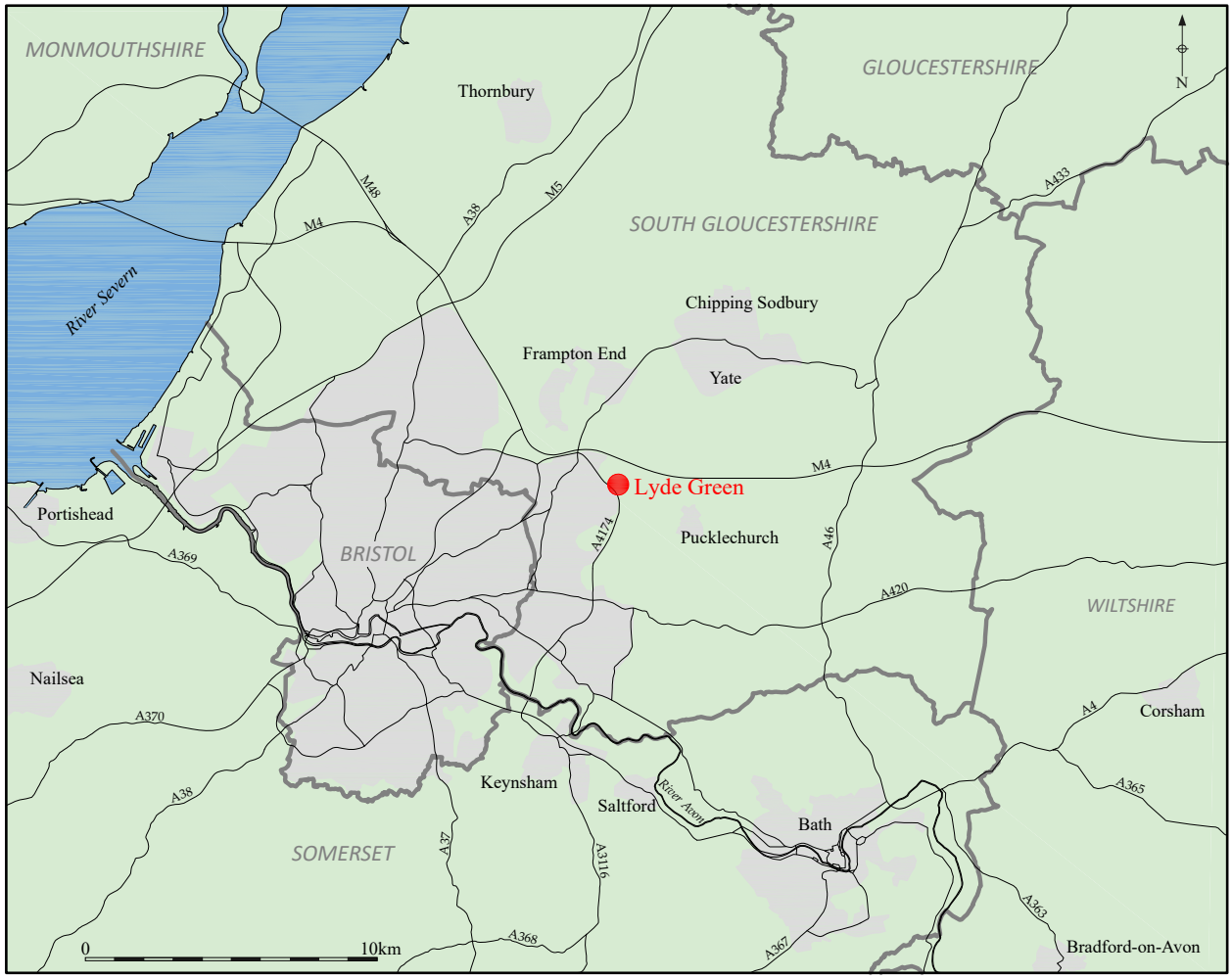


Figure 1.1 The location of Lyde Green

stone robbing, as well as modern agricultural activity, with no floor surfaces of any of the Romano-British buildings remaining in situ. Evidence of a medieval field system was found, as well as some Post-medieval quarrying. Where the focus of activity was during the 5th-8th century is unknown, but an important 9th-10th Anglo-Saxon iron smelting site has been excavated just 250-300m to the west of the main villa building (Figure 1.2). The most significant observation is the degree of continuity on the site from the 1st century AD into the late Roman period. The Lyde Green excavations have allowed archaeologists to plot the development of this section of landscape over several hundred years, from a rural farmstead of the very late Iron Age into a Romano-British villa estate.

1.1. The purpose and format of this publication

The Romano-British villa at Lyde Green provides an opportunity to contextualise similar remains from elsewhere in the Bristol/south Gloucestershire sub-region. Such an opportunity has implications for our knowledge and understanding of villa economies and landscapes throughout south-west England. This publication is, therefore, not set out as a standard description of the excavation results, like that recently published for the nearby villa at Wortley (Wilson *et al.* 2014), for example. The focus lies more on the landscape and on the wider understanding of villas in south Gloucestershire, rather than on a detailed examination of the remains of the Lyde Green villa itself. Consequently, detailed stratigraphic descriptions are avoided, though such can be accessed through the site archive (deposited with Bristol Museums Service) and in the unpublished archive and assessment reports available through the Archaeology Data Service (Bailey 2013; Churchill 2013; McElligott 2012; McElligott 2014a; McElligott 2014b; Moore 2013).

Archaeology at the Lyde Green site was not well preserved, having been adversely impacted by both the character of the soil and by its post-depositional history. A modern farm track, for example, had been constructed directly over the main villa building and had to be removed before excavation could begin. There are other villa sites in the Bristol/south Gloucestershire sub-region that have survived in a better condition and which have provided more detailed examinations of aspects of Romano-British villas. The exploration of these sites, however, is generally far more fragmentary than was the case at Lyde Green. The nature of the remains at Lyde Green, and their condition, was a highly significant factor in the determination of the approach taken in this publication.

The opportunity to use the Lyde Green excavation data to contextualise other villa sites in south Gloucestershire and more widely in the South-West, as well as there being a reasonably large and significant finds assemblage associated with the villa, justify its publication as a monograph. This monograph is illustrated with plans, sections, finds drawings and site photographs, along with, where relevant, regional distribution maps. The monograph is referenced throughout using the Harvard system. Where references are made to the South Gloucestershire Historic Environment Record, these are either given as a reference to the online Historic Environment Record or to the individual record's Primary Record Number (PRN). Footnotes and endnotes have been avoided and an extensive bibliography is included at the end of the book.

The monograph is set out as a sequenced chronological approach to the development of the Lyde Green landscape. For the most part, finds and palaeoenvironmental analyses are contained within the relevant chapters, and not within a separate technical section. The authors consider that this makes for a more integrated and harmonious study. The remaining part of this introductory chapter outlines the development context within which the archaeological evaluations and excavations took place. A brief account of the archaeological and historical background is given, as well as a summary of the chief archaeological findings. Chapter 2 gives a little more detail concerning the evolution of the research objectives, from the fieldwork to post-excavation stage. Chapter 3 discusses the development of the landscape before the onset of the Late Iron Age. Evidence from the excavations constitutes residual Mesolithic and Neolithic assemblages of stone tools and a small quantity of Bronze Age pottery derived from two pits in Area E.

Chapters 4, 5 and 6 introduce and interpret the main body of the data relating to the Late Iron Age and Romano-British rural site. Chapter 4 describes the evidence available to date the origins of the Lyde Green settlement, as well as the nature of the occupation site and its early farming practices. The evidence for the development of the Late Iron Age farmstead into a substantial, but not hugely wealthy, Romano-British villa estate is examined in Chapter 5. Chapter 6, on the Romano-British artefactual assemblages, is divided into several sections. Section 6.1 and 6.2 discuss the 181kg of Roman-period pottery and transitional wares (wares of the Late Iron Age which continued in production into the 1st century AD). Section 6.3 summarises the 36kg of ceramic building material (far from being a large assemblage for a site of this nature). Section 6.4 covers the small finds. A fairly standard assemblage for this type of site, it consists mainly of dress accessories, with a few toilet implements, household items and farming implements. Section 6.5 presents the analysis of the 77 Roman coins found during the excavations. Some

of these were stratified, but the majority were metal detected from the spoil heaps. Section 6.6 presents the results of scientific analyses on the iron-smelting and blacksmithing waste. Strong evidence of both practices being carried out at Lyde Green during the Roman period is present. Iron smelting at villa sites is a reasonably rare occurrence and there are indications that this became a specialism of the local population, with the nearby Anglo-Saxon smelting site mentioned above having also recently been excavated.

Chapter 7 deals with the few archaeological features and artefacts of medieval and Post-medieval date. These periods were probably most notable for stone-robbing activities, dismantling the Roman stonework for use elsewhere.

The final chapter (Chapter 8) discusses the evidence for the development of a Roman villa at Lyde Green within its regional context. Eighteen other villa sites within a *c.* 20 km radius of the Lyde Green site are examined to help understand what is typical or atypical about it.

This publication will focus on the main phases of significant archaeological activity at the site. For the purposes of this monograph, the archaeological remains have been assigned 6 broad periods of activity, with Period 1 representing the Middle Bronze Age to Early Iron Age activity, and Period 6 representing the Post-medieval activity. For the purposes of analysing the phasing on each of the excavation areas, these periods have been broken down into 13 sub-periods outlined in Table 2.1 of the following section. Chapter sections 2.7, 3.6-4.4, 4.4, 5.1-5.7 & Chapter 7 describe the principle archaeological features within each phase, and are ordered by the phases of activity. Some of the information and data from specialist reports has been integrated into this text.

Many of the archaeological features discovered at Lyde Green comprised the truncated remains of negative cut features, including pits, ditches and postholes. For this reason, in many cases the interpretation of the heavily disturbed and fragmented archaeological remains is either not possible or must remain highly tentative. Within the description of the archaeological features, structure and enclosure numbers have been assigned where appropriate, and have no chronological relevance, but are a descriptive aid. Chapter 2 also contains figures outlining the main phases of archaeological activity. These figures show context, group and building numbers as necessary. Each feature was recorded in its entirety and where features have been truncated, or their extent exceeded the limit of excavation, conjecture has been used to aid interpretation. This conjecture is clearly marked on the figures and takes the form of dashed lines.

1.2. Project background

Wardell Armstrong LLP was commissioned by Taylor Wimpey PLC, Linden Homes and Emersons Green Urban Village Ltd to undertake a programme of archaeological investigation at Emersons Green on land known as Lyde Green. The work was required as a condition of planning consent (Planning Application No. PK04/1965/0) for retail, residential and commercial development.

Condition 23 of the planning permission required an agreed programme of archaeological works to be submitted and carried out. It was agreed with the Archaeological Officer at South Gloucestershire Council that, once all archaeological investigation was completed on site, the partial discharge of condition 23 prior to the commencement of enabling works would be recommended, thus releasing the site from further development constraints. Consequently, at the time of writing the development of Lyde Green is well underway, with a number of the residential estates already having been built.

Five phases of trial trenching and six separate open-area excavations were conducted by Wardell Armstrong LLP on behalf of the clients ahead of the construction of several residential estates (see below). During the project, five of the excavation areas were designated areas A to E. For the purposes of this monograph a sixth area, undertaken for Linden Homes adjacent to the A4174 Avon Ring Road, has been designated as Area F (Figure 1.2). The excavation areas were located to the south of Whitehouse Farm and surrounding the former Hallen Farm, now overbuilt. Wardell Armstrong carried out the post-excavation assessment work in 2014 and 2015, with the analysis and monograph writing taking place in 2018 and 2019.

All archaeological work undertaken was carried out in accordance with agreed project designs, known as written schemes of investigation (WSI). All WSIs for the archaeological works were prepared by Wardell Armstrong LLP and submitted to the Archaeology Officer of South Gloucestershire Council for approval on behalf of Taylor Wimpey, Linden Homes and Emerson Green Urban Village Ltd. The WSI for the excavation included provision for consolidating the site records and finds assemblages into an archive, a post excavation assessment, post-excavation analysis and publication of the archaeological results.

1.3. The development site

The excavations at Lyde Green are a direct result of plans outlined in the 'Emersons Green East' development brief, adopted in 2006 and designed to meet the dwelling needs of South Gloucestershire

for the period up to 2011. The development area described in the brief covers 177-ha, delimited to the west by the A4174 (the Avon Ring Road), the M4 motorway to the north, and the route of a disused railway line to the south and east (see South Gloucestershire Council 2006a, fig. 1). The ongoing growth of the city of Bristol, of which the recent development has been a small but significant part, has resulted in the urbanisation of this landscape unit (South Gloucestershire Council 2015: 1). Numerous archaeological interventions associated with this ongoing process of urbanisation, for example, were undertaken by the Avon Archaeological Unit in the 1990s and early 2000s. These related to an area west of the Avon Ring Road, close by, but outside of the Emersons Green East development area (see, for example, Erskine 1998; Hume and Samuels 1996; Townsend 2001). In 2015 Emersons Green became officially recognised and administered as a town, with the parish of Mangotsfield Rural being renamed after it.

For much of the 20th century, however, this area was occupied by little more than a collection of hamlets surrounded by farmland within the Gloucestershire parish of Mangotsfield Rural. The name Emersons Green is not a new creation. Indeed, it is frequently asserted that the community is named in commemoration of local 18th-century industrialist James Emerson of Hanham (Wardell-Armstrong 2006). Emersons Green is the historic name of a former green settlement within the hamlet of Downend, lying to the west of the modern Avon Ring Road. 'Emerson's Green', appearing in this case with the correctly used possessive apostrophe, is clearly shown on the later 19th-century Ordnance Survey maps. Along with Vinny Green, Sherman Green and Lyde Green, it was one of numerous green settlements within the vicinity. It was a long-established settlement by 1788 when common rights were extinguished over the green, parts of which at least remained unenclosed into the later 19th century (Parliamentary Archives HL/PO/PB/1/1788/28G3n79).

The development at the Emersons Green East site necessitated archaeological investigations both as precursors for developers to gain planning consent and as conditions of consent. These planning requirements were stipulated within the policies of the then current South Gloucestershire Local Plan, adopted in January 2006 (South Gloucestershire Council 2006b: 61). In accordance with the Local Plan, the costs of the resultant archaeological works were expected to be met by the developers. At Emersons Green these expectations were fully met by the developers and resulted in the production of this monograph.

1.4. Location, topography and geomorphology

The site lies on the north-eastern outskirts of Bristol, South Gloucestershire, *c.* 7 miles from the city centre. Emersons Green East lay within undulating open arable and pasture farmland. The investigation area at Lyde Green is relatively low-lying, situated on contours ranging from 50m to 64m above sea level. A small watercourse flows south to north, south of Whitehouse Farm and to the immediate east of the site. Eventually this watercourse becomes the Folly Brook and flows into the River Frome to the north of the M4. The excavation areas lay a short distance to the west of this watercourse. Emersons Green East is within the Bristol, Avon Valleys and Ridges National Character Area (Natural England 2014), which is comprised of a 'steep scarp crowned by a high, open wold', which is 'interspersed by wooded valleys' (*ibid*). Within the South Gloucestershire Landscape Character Assessment, Emersons Green East is situated in Landscape Character Area 12 - Westerleigh Vale and Oldland Ridge. This character area extends from the A431 road in the south, to the Bristol to London railway line in the north. The area is characterised by a gently rolling to sloping landscape. The landscape is contained to the east by Pucklechurch Ridge and to the west by the urban fringe of Bristol. It also features a diverse vegetative structure of overgrown and clipped hedgerows and tree growth, which is often associated with older settlement and common land (South Gloucestershire Council 2006a: 97).

The underlying geology is complex, with four different bedrock groups located within the site boundaries (British Geological Survey 2018). The bulk of the geology is composed of the Mercia Mudstone Group; a sedimentary bedrock formed during the Triassic Period approximately 201 to 252 million years ago. This mudstone includes an area centred around Lyde Green, where the geology comprises Farrington Member and Barren Red Member Sandstone, which formed 308 to 310 million years ago in the Carboniferous Period. Mudstone belonging to this group and formed during the same period is present north of the sandstone. To the west of the investigation area the bedrock geology comprises sedimentary rock consisting of mudstone, siltstone and sandstone of the Mangotsfield Member. These rock types were formed 310 to 315 million years ago, again, in the Carboniferous Period. The overlying superficial deposits across the Lyde Green area of Emersons Green East consist of shallow, clayey silt topsoils. The solid bedrock geology was encountered immediately upon stripping these topsoils. This caused some problems during the archaeological investigation during the winter of 2012, as the site was particularly wet and little natural drainage was available.

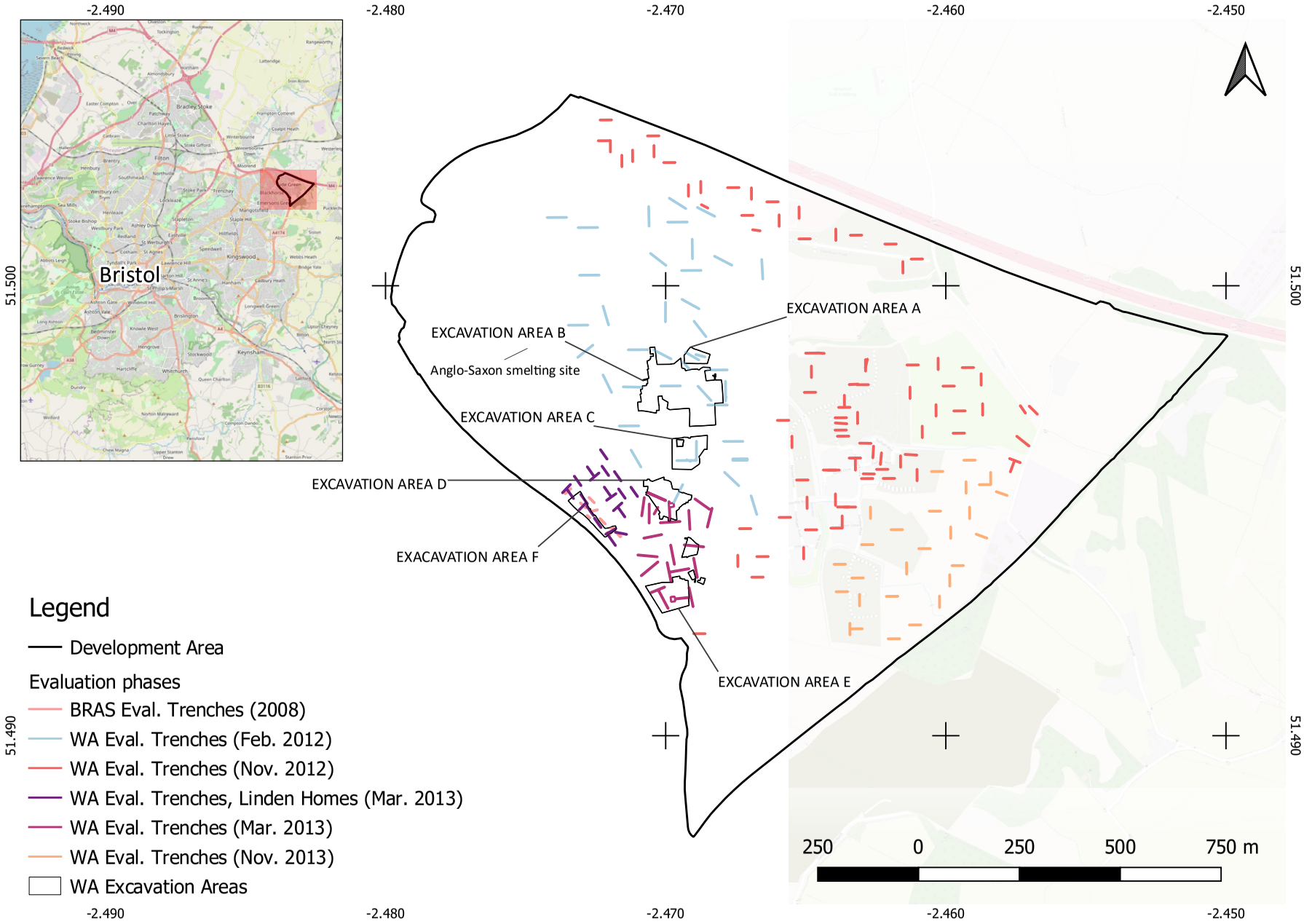


Figure 1.2 The location of the trial trenches and excavation areas. © OpenStreetMap contributors

Chapter 2

Research objectives, methodologies and summary of results

Richard Newman, Matthew S. Hobson, and Damion Churchill

2.1. The purpose of research objectives

Research objectives help focus a project's research effort on the topics that require investigation and that are appropriate to the dataset being studied. Topics for investigation, or research themes, have been articulated within regional archaeological research frameworks for some time now. For South Gloucestershire the relevant regional research framework covers the south-west of England. Within this research framework emphasis is placed on the need to move away from the structural history and structural comparisons of villa buildings towards a better understanding of their agricultural, social and economic context (Holbrook 2008: 151-152). This research need has influenced the development of the research approach undertaken for the site at Lyde Green.

2.2. Summary of the archaeological and historical background

One of the issues with the archaeology of the Bristol and South Gloucestershire sub-region is that a lot of the data generated through developer-funded archaeological projects remains unpublished, or only partially published. Even so, much of this material can be accessed in the form of grey literature reports through the Archaeology Data Service, and as summary site data within the South Gloucestershire Historic Environment Record (HER).

Knowledge of prehistory within the immediate vicinity of Lyde Green is limited. Before the Lyde Green archaeological project, this primarily consisted of worked flint flakes found along the route of the Avon Ring Road. This lithic material is likely to be later prehistoric in date, though one Mesolithic micro-burin has been recovered (PRN 8303). In addition to the lithic artefacts, a sub-circular cropmark at Rickets Hill (ST 67500 76615) was considered a likely prehistoric site (PRN 8816). More widely within south Gloucestershire evidence is patchy, both in character and distribution.

As has recently been stated for Bristol, despite the well-known relatively local Neolithic monuments such as the trackways in the Somerset levels and the Cotswold-Severn chambered tombs, evidence at present for the Neolithic in the southern part of South Gloucestershire is very limited (Baker *et al.* 2018: 73). The lack of information for the wider Bristol sub-region is reflected in Darvill's overviews of Gloucestershire's prehistory, despite the recent growth in data facilitated through developer-funded archaeological projects (Darvill 2006; 2011). Such changes in the funding emphasis of archaeological work however have, along with the Portable Antiquities Scheme, greatly increased the sub-regional knowledge base for the Bronze Age. This is of course in part a result of some Bronze Age material being responsive to metal detection, unlike that from the Neolithic. Metal finds have been recovered from the Avon Valley and a hoard was recovered from Kings Weston (Baker *et al.* 2018: 74). Closer to Lyde Green a settlement site was excavated in the 1990s at Bradley Stoke (Baker *et al.* 2018: 74; Erskine 1995; Simmonds 2011: 14-17). It is from such small farming settlements, as elsewhere in southern Britain, that the landscape was exploited during the Bronze Age (Baker *ibid*). In general, the sub-region for both the later Neolithic and Bronze Age, away from the Cotswolds and upper Thames valley, exhibits a lack of monumentality within the landscape. This is referenced in Darvill's 2006 review (20-23; 35-38), but this may be more a facet of visibility and discovery rather than past levels of activity in the local landscape.

For the Iron Age, evidence from the Bristol/South Gloucestershire sub-region is comparatively abundant (Figure 2.1), even if it is less so than it is for the Gloucester environs and the upper Thames valley (Moore 2006a; b). In addition to hillforts such as that at Kings Weston, other types of settlement are known such as the Late Iron Age to early Roman settlement that preceded the villa at Kings Weston (Baker *et al.* 2018: 74). To the east of Lyde Green, in Pucklechurch, is the site of an enclosed Iron Age settlement (Historic England list 1004542). At Henbury crouched inhumations were found along with an enclosure thought to be Late Iron Age but devoid of internal features and lacking in datable finds (Baker *et al.* 2018; Evans *et al.* 2006).

By the later Iron Age, the Severn/Cotswold region is generally considered to have formed part of the Dobunnic tribal territory. The South Gloucestershire area, however, has been an area of contention regarding its tribal affiliation. The authors of the Tockington Park report referred to it as one of 90 villas within the territory of the western Belgae (Masser and McGill 2004: 106). The idea that the Belgae had a territory that extended westward to the Severn estuary was based

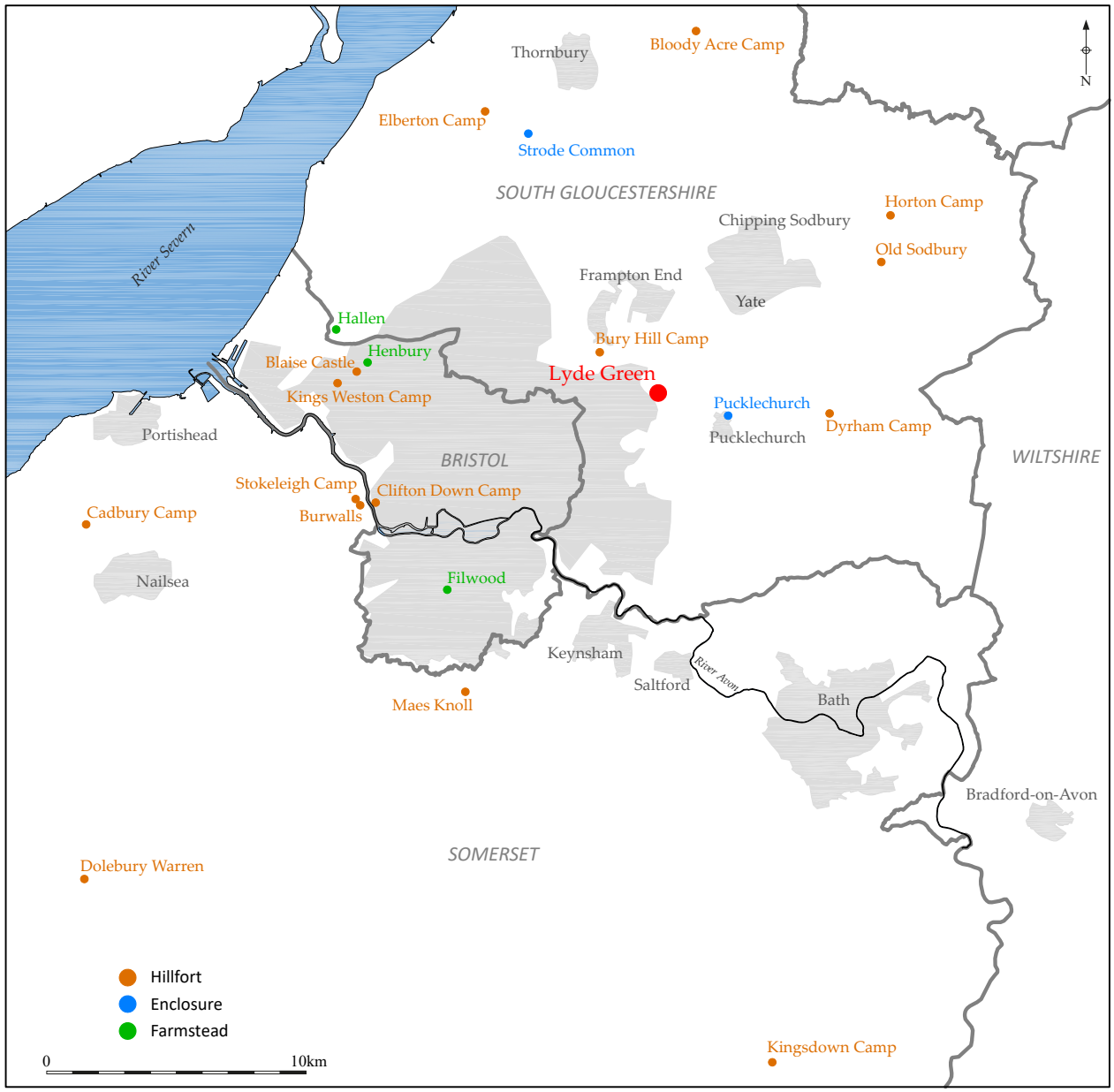


Figure 2.1 Plan illustrating the location of Iron Age sites in the region of Bristol and South Gloucestershire

on Ptolemy's geography which, written in the mid-2nd century AD, includes Bath with Winchester as being in the tribal territory of the Belgae. Writing earlier in the mid-1st century BC, however, Julius Caesar had stated that Belgic influence and settlement was confined to the coast across the channel from their homelands in Gallia Belgica (Hawkes 1968). Following Ptolemy, some archaeologists and historians such as Keith Branigan (1976: 109-114) have consequently argued that the Belgae must have inserted themselves between the Durotriges and the Dobunni, occupying much of the north Somerset and Bristol region. Others concentrate on the archaeological evidence and consider that the Belgae came no further west than what is now south-east Wiltshire (Eagles 2004: 235). More radically, Barry Cunliffe largely wrote the Belgae out of history (Cunliffe 2005: 582) and considers that Dobunnic territory extended south of the Bristol Avon (Cunliffe 2005: 592). Generally, by the end of the Iron Age, South Gloucestershire is now viewed as being within a distinctive southern grouping of the Dobunni, defined by their cultural associations (Moore 2006b: 210). This is the assumption made in this study and consequently, the primary sites chosen as comparators for Lyde Green are considered mostly to be within the same tribal territory and regional cultural network.

The wider region occupied by the Dobunni tribe is considered by the Late Iron Age to be densely settled and intensively farmed (Moore 2006b: 69). There is some evidence from the wider Dobunni tribal region to indicate continuity of some Late Iron Age enclosed

settlements into the Romano-British period and a lack of dislocation in cultural development is further suggested by the continued use of pottery forms and fabrics into the later 1st century AD (Moore 2006b: 74-75). Within the wider region, some locational relationships have been noted between Late Iron Age enclosures and early Roman villas, as at Ditches (Trow *et al.* 2009), suggesting the adoption of Roman lifestyles by local tribal elites (Moore 2006b: 78). The later Roman villa at Lyde Green is one of many known south of Gloucester and north of the Avon Valley in the Cotswolds and the Severn Vale within the tribal territory of the Dobunni (Figure 8.3 & Figure 2.2). Whilst within an area that then, as now, appears to have been rich agricultural land, the location of these villas cannot simply be assumed to have been chosen 'because of the high quality of the arable land' (Wilson *et al.* 2014: 3). Within this monograph, addressing the issue of why there were so many villas in the Bristol/South Gloucestershire sub-region is a key objective.

The relative wealth of the Bristol/south Gloucestershire sub-region continued beyond the Roman period, and this is reflected in the royal estates that developed in the area during the early medieval period. The area may, for example, have been a southern focus of the kingdom of the Hwicce, following the areas subsumed under Saxon control after the Battle of Dyrham in AD 577. The possible significance of the area may be indicated by the local presence of Middle Saxon royal estates as indicated by 'Kinston' place names (Bourne 2017: 25 & 34), as at Kings Weston, Kington (Thornbury)



Figure 2.2 The tribal territory of the Dobunni

and West Kington (in Wiltshire close to Dyrham but possibly within a different Middle Saxon polity). Later under West Saxon rule, Kingswood seems to have been a royal hunting preserve and by the 10th century AD there was a royal hunting lodge established within the former Iron Age enclosed settlement in Pucklechurch (Historic England list 100452). The area also had significance from the Romano-British period for iron smelting and this seems to have continued to be significant during the early medieval period. Adjacent to Lyde Green is the site of Middle-Late Saxon smelting furnaces discovered by the Avon Archaeological Unit during archaeological investigations in advance of the Bristol and Bath Science Park (PRN 19939). On the basis of radiocarbon dating, the Saxon smelting activity at Lyde Green appears to have dated to the later 9th or early 10th centuries AD (Young and Young 2013).

Kingswood continued as a royal forest, subject to forest law, until it was disafforested and became a royal chase in the 13th century (Moore 1982). Within the forest, but adjacent rather than within the chase, the Lyde Green area contains much of the landscape character of a well wooded district in the medieval period, with areas of woodland pasture grazed in common by local communities becoming available for settlement expansion later in the Middle Ages. This is likely to be the origins of the green settlements that developed such as Emersons Green, though such places only emerge in the documentary record in the Post-medieval period. There are numerous medieval documents that refer to Mangotsfield within the Berkeley Castle muniments (BCM/E/1), these include references to people whose surnames reflect where they dwelt, for example 'atte forde' and 'atte broke'. One such reference within the lay subsidy roll of 1327 to 'Roger atte Halle' (Franklin 1993) is likely to be associated with the former Hallen Farm. Other evidence of later medieval settlement in the area includes sherds of later medieval pottery found during the construction of the Avon Ring Road.

Coal mining was first recorded in the area in 1228 but was probably carried out as early as the Roman period (South Gloucestershire Council 2006a: 101). By the 17th century coal mining was widespread throughout Pucklechurch, Westerleigh and Mangotsfield (Southway 1972: 26-27). Mechanisation to pump water, first by horse gin and then steam engine, was introduced from the mid-18th century and a century later tramroads were being used to transport the coal. By the late 19th century brickworks had been established at many coalfields in the locality, with the Shortwood Brickworks situated to the immediate south of Lyde Green (Doughty and Ward 1975). Many of the local archaeological sites recorded in the South Gloucestershire HER relate to industrial remains of the 18th to 19th centuries and such remains were encountered in the archaeological site evaluations undertaken at Lyde Green.

2.3. Previous archaeological investigations

The first archaeological investigations associated with the planned Lyde Green development of Emersons Green East were a topographical and geophysical survey carried out in 2004 (Roseveare 2006) and a desk-based assessment in 2005 (Bryant 2005). The 2004 geophysical survey revealed isolated linear features, fragments of a prehistoric field system and potential early collieries. The densest concentration of features focused around Lyde Green (Roseveare 2006). A further geophysical survey was undertaken in 2008 covering the portion of the site which later became Excavation Area F. Possible ditches, pits and a putative circular ditched feature were noted (Smalley 2008).

The first intrusive archaeological investigation within the Lyde Green area was an archaeological evaluation by trial trenching, carried out by Bristol and Region Archaeological Services in 2008 (Wills and Hoyle 2009: 316). Nine trenches were excavated to investigate the geophysical anomalies and whilst features were found, the lack of datable artefacts made them difficult to interpret.

The first hint of Romano-British remains being present within the development area occurred in 2011, during preliminary geotechnical investigations (Young 2011). These were undertaken by Hydrock Ltd and monitored by Avon Archaeology Ltd. Towards the northern end of the site, evidence of extensive and numerous features associated with Post-medieval coal mining activity was observed. Further evidence of this mining activity was discovered to the south of Lyde Green, with two backfilled shafts and a series of associated stone drains uncovered during the works. To the east of this activity, a large feature, the nature of which was unclear, was excavated from which a substantial quantity of 2nd to 4th century AD Romano-British pottery was recovered. The feature was speculated to have been part of a hitherto unknown settlement.

2.4. Wardell Armstrong's evaluation trenches

Following on from the geotechnical investigations undertaken in 2011 by Hydrock Ltd and monitored by Avon Archaeology Ltd, Wardell Armstrong was commissioned to conduct five phases of trial trenching within the development area (Figure 1.2). The first of these, a 38-trench archaeological evaluation in the vicinity of what was then Hallen Farm, took place in February 2012. The work identified the presence of significant archaeological remains within the area, which dated from the Bronze Age to the Late Romano-British period (McElligott 2012). As a result, an archaeological mitigation strategy was agreed, the WSI for which detailed a strip, map and sample excavation across a defined area. This methodology resulted in three open areas (A, B and C) being excavated in the fields to the north, east and south of Hallen Farm. This work was carried out in three phases spanning August 2012 to September 2013 and is described in more detail in the following section (McElligott 2014b).

A second series of evaluation trenches was opened by Wardell Armstrong for Taylor Wimpey PLC in March 2013 (Bailey 2013), involving the excavation of 21 trenches. The archaeological features observed were concentrated within six trenches. The features consisted of possible Romano-British ditches and gullies along with stone-lined drains and a trackway. These features formed the nucleus of open excavation Area D. A single pit was also recorded in which pottery of prehistoric date was found, and nearby a Bronze Age pot with calcinated human bone was uncovered. Consequently, later in 2013, open Area E was excavated around this trench, but no further Bronze Age material was recovered.

In an area that eventually saw the opening of Excavation Area F, the indeterminate nature of the results of the 2008 evaluation carried out by Bristol and Region Archaeological Services led Wardell Armstrong to undertake a geophysical survey across the same area in 2013 (Clark 2013). This was followed in the same year by another evaluation in the same field previously evaluated by the Bristol and Region Archaeological Services and in the neighbouring field to the north-east. The new evaluation comprised 21 trenches (Figure 1.2). A rock-cut ditch was noted which had previously been observed in the Bristol and Region Archaeological Services 2008 evaluation (Churchill 2013).

The other two phases of evaluation were carried out by Wardell Armstrong on behalf of Taylor Wimpey. Seventy-three trenches were investigated in November 2012, with a further 29 following in the late autumn and early winter of 2013 (Churchill and Vance 2013). As only a handful of these trenches recorded archaeological features, and none contained evidence of occupation or activity dating prior to the Post-medieval period, no open-area excavations resulted from these phases of investigation.

2.5. The excavation areas: research objectives and methods

Six open area excavations were carried out from mid-2012 to mid-2013 (Figure 1.2). At their height, the excavations were undertaken by a team of about 30 archaeologists (Plate 2.1). Further staff supported the project by processing survey data and producing illustrative site plans as the on-site element of the project progressed. Area A lay just to the north of the



Plate 2.1 The excavation team working on Area B in February 2013

spot now occupied by Lyde Green Primary School at ST 67559 77837. Area B was located directly beneath the Primary School, centred on ST 67496 77744 and at an approximate height of 63m AOD. Area C lay beneath and 60m to the north of what is now Clover Rd at ST 67524 77585 and at an approximate height of 63m AOD. Area D was situated to the south of Area C at ST 67490 77448, now the junction of Acorn Drive and Willowherb Road, at an approximate height of 60m AOD. Area E was located between Area D and the Emersons Way roundabout on the A4174 at ST 67476 77325, at an approximate height of 60m AOD. Area E comprised four adjoining but separately executed excavations, beneath what is now Heather Rd. Area F lay north west of Area E and directly west of Area D at ST 67311 77441, beneath what is now Orchid Close, at an approximate height of 60m AOD.

The six open area excavations measured a total of 4.83 ha. Excavation Area A measured *c.* 0.19ha, Area B measured *c.* 2.23ha, Area C measured *c.* 0.6ha, Area D measured *c.* 0.7ha, Area E measured *c.* 0.8ha and Area F measured *c.* 0.31ha. A handful of smaller trenches were also excavated to establish the limits of the archaeological remains in the five larger areas. The detail of the investigation of these trenches has been included with the area results.

The small Area A was tackled first and revealed archaeological features consistent with those found during the evaluation. Areas B and C, by contrast, both had to be enlarged due to the density and importance of archaeological features encountered. The winter months presented considerable logistical challenges. Waterlogging caused a delay to the opening of Area B, as the machinery was getting stuck. This resulted in Area C being tackled second whilst adequate drainage was arranged. Five natural springs were eventually revealed within Area B, which resulted in portions of the site being consistently wet. Structure {3583}, which had been part of the Roman villa's water management infrastructure, had water flowing through it almost continually (see Chapter 5). On top of these natural spring lines, rain and snow caused significant flooding in parts of the excavation area. This was particularly severe in the NE corner, the lowest portion of the site. A series of channels had to be excavated to allow water to run away from flooded areas that still needed to be investigated. This strategy and the use of a pump was reasonably successful, but throughout the course of the excavations the ground at the base of the ridge never fully dried out.

Areas D, E and F, by contrast, were excavated during the summer months and did not present the same issues with waterlogging. Areas D and E were excavated over a six-week period from the 3rd of June to the 12th of July 2013, with Area F being completed during the first three weeks of August.

The geology within the site consisted of reddish/ pinkish bedrock on the sides and top of the ridge, with

a band of impermeable yellow clay running along the base of the slope. For the most part, therefore, the archaeological features were easy to discern, their darker fills standing out clearly against the lighter bedrock or clay. Relationships between features were also readily observable. Intercutting and recut features usually had distinct coloured fills, which helped to distinguish the sequence of events.

The excavations were carried out utilising three written schemes of investigations, prepared by Wardell Armstrong and approved by South Gloucestershire Council, one for areas A, B and C, another for areas D and E, and a separate one for Area F.

The objectives of the excavations were outlined as follows:

- to elucidate the results of the trial trenching which identified archaeological features and deposits of Romano-British date
- to establish the spatial extent and character of the archaeological remains
- to establish a chronological sequence for the deposits and substantiate any evidence for phased activity
- to identify archaeological remains which may pre-date or post-date those uncovered in the trial trenches
- to set the archaeological remains within a local and regional archaeological context
- to disseminate the results of the fieldwork through an appropriate level of reporting

The topsoil was removed by 360° tracked excavator and removed from site by seven-tonne dumpers and stored in locations close to the area stripped. Where encountered, modern features such as field drains were left *in situ*, unless the excavation of these was required to investigate archaeological remains. All archaeological features were investigated and recorded utilising Wardell Armstrong's *Excavation Manual* (2012). Positive features, such as walls or surfaces were hand excavated to a degree whereby function and form could be ascertained. Features such as ditches and gullies were sectioned with a minimum of 10% of their fills being removed. Discreet archaeological features such as pits and postholes were 50% excavated. Burials were 100% excavated to allow recovery of all human remains within the grave. Other features, such as structures, were subjected to up to 100% excavation if it was deemed necessary. In all instances of excavation, sections or elevations were drawn, detailing the archaeological sequence as observed. Plans were drawn at a scale of 1:50, 1:20, or larger where appropriate.

Survey of archaeological features on the site was undertaken using a differential GPS with the data processed using Trimble Office. Illustrations were produced from this data using the AutoCAD software, QGIS and Adobe Illustrator. A grid was established using the GPS for each area, independent of the other areas of excavation. Environmental samples were taken in line with the aforementioned Wardell Armstrong *Excavation Manual*, with up to 40L of material recovered from appropriate archaeological deposits. An exception to this were deposits from either suspected or confirmed graves. The deposits within these were subject to a 100% sampling strategy, to ensure any human remains that might have been present be recovered. Accompanying the ecofactual material, significant quantities of artefactual remains were recovered from the excavation at Lyde Green and were processed whilst the programme of site based archaeological works was still ongoing.

The processing of both the artefactual and ecofactual material was completed and quantified as part of the post-excavation programme, with reports produced for each category of artefact. The reports included a basic quantification of the material. The ecofactual material was sorted and quantified. These reports were compiled into two post-excavation assessment reports, which give details of the results of the excavations (McElligott 2014a; McElligott 2014b). A full account of the stratigraphic sequence was written, along with accompanying illustrations, photographs and summary discussions to support these chronological accounts. A copy of each report was filed with the South Gloucestershire HER. The reports were also submitted to the *Online Access to the Index of Archaeological Investigations* project (OASIS).

Both the artefactual and ecofactual material was assessed for its potential for further work, along with recommendations for the work in the Updated Project Design (UPD) (Giecco and Newman 2015).The outcome of this assessment, agreed with South Gloucestershire Council and with the developers who funded the interventions, was that the archaeological results should be published as a monograph. The defined monograph was to present a chronologically sequenced development of the landscape of the Lyde Green area, with a focus on the Romano-British villa landscape. The focus on the villa landscape was to be used to explore more widely the development of villas in the Bristol/ south Gloucestershire sub-region (Giecco and Newman 2015).

The project archive consists of three elements, a material archive, a paper archive and a site archive report. The material archive consists of all the finds not subject to discard and any retained environmental samples. This will be deposited with Bristol Museum and Art Gallery. The paper archive consists of all the original site records and any new analytical documentation



Figure 2.3 Plan showing the concordance of phasing between all excavation areas. © OpenStreetMap contributors

generated during the post-excavation programme. The site archive report consists of all the grey literature reports generated during the fieldwork, together with the written schemes of investigation including the updated project design for post-excavation analysis. In addition, the site archive report includes full copies of all post-excavation specialist reports, a draft copy of this publication and any referees or curatorial comments received. A paper copy of the site archive report has been deposited with the material and paper archives and a digital copy is available from the South Gloucestershire Council Historic Environment Record.

2.6. Post-excavation research objectives

The post-excavation research objectives were constituted by two aims which could not be delivered by fieldwork alone, and two aims that were identified following the fieldwork:

- to disseminate the results of the fieldwork through an appropriate level of reporting
- to set the archaeological remains recorded within a local and regional archaeological context
- to clarify the likelihood and nature of post-Roman use of the site and its environs
- to reconsider the archaeological evidence for Roman villas in the Bristol/south Gloucestershire sub-region and their impact on the landscape

The need to better understand the agricultural, economic and social context of Romano-British villas continued to form an overarching research approach for the Lyde Green work during post-excavation analysis, and was focused further by commentaries and research questions advanced in recent publications. Neil Holbrook, in his consideration of recent research into the Roman period in Gloucestershire, emphasised how the distribution pattern of villas is being reconsidered because recent discoveries in the Bristol area have shown that it was not, as previously thought, an area of comparative villa absence when contrasted with the Cotswolds (Holbrook 2006: 110). Until recently, one of the few villas known from the Bristol vicinity was the villa at Tockington Park and excavations close to that villa in 1997 prompted speculation on the relationship of earlier settlements with the later villa (Masser and McGill 2004: 107). Another relatively nearby villa investigated in 1997-8 is Turkdean and here some research questions were raised in relation to that villa which are also applicable to Lyde Green. 'What factors led to the selection of this site? Upon what basis was the economy of the villa founded? What impact did the construction of the villa have on pre-existing patterns of agriculture and settlement?' (Holbrook 2004: 66). In addition, the importance was emphasised of understanding the landscape setting of the villa, both spatially and chronologically (Holbrook 2004: 67). This final comment has been reiterated in a very recent overview of Romano-British rural settlement by Allen and Smith (Allen *et al.* 2017: 37). Their overview also highlights the need for further study of the roles of villas as producers and consumers, and of their position within the settlement hierarchy (Allen *et al.* 2017: 33). In the light of these research comments, which are highly applicable to the dataset from Lyde Green, an emphasis has been placed on contextualising the Lyde Green villa with regard to its various spatial, chronological and social impacts and roles.

2.7. Summary of the principal archaeological phases

During post-excavation assessment the archaeological features and deposits were stratigraphically phased. The phasing was then refined by the application of spot dating, primarily using pottery and supported by a modest program of radiocarbon dating (Appendix 2). The numbered phasing for each area is unique to that area. Area A phase 1, for example, is not necessarily of the same date as Area D phase 1. A concordance of the phasing, however, is given in Table 2.1 below, in which

Table 2.1 Concordance of phasing between excavation areas

	Period	Area A	Area B	Area C	Area D	Area E
1.0	Middle-Late Bronze Age					Phase 1
2.0	Early Iron Age	Phase 1				
3.1	Late Iron Age/Early Romano-British (AD 1-125)			Phase 1	Phase 1	
3.2	Late Iron Age/Early Romano-British (AD 1-125)		Phase 1	Phase 2	Phase 2	
3.3	Late Iron Age/Early Romano-British (AD 1-125)		Phase 2	Phase 3	Phase 3	Phase 2
4.1	Romano-British (AD 125-200)				Phase 4	
4.2	Romano-British (AD 125-300)	Phase 2	Phase 3	Phase 4	Phase 5	
4.3	Late Romano-British (AD 275-325)			Phase 5	Phase 6	
4.4	Late Romano-British (AD 275-400)		Phase 4	Phase 6	Phase 7	
4.5	Late Romano-British (AD 300-400)		Phase 4b	Phase 7		
5.0	Medieval	Phase 3	Phase 5		Phase 8	
6.0	Post-medieval	Phase 4	Phase 6	Phase 8	Phase 9	

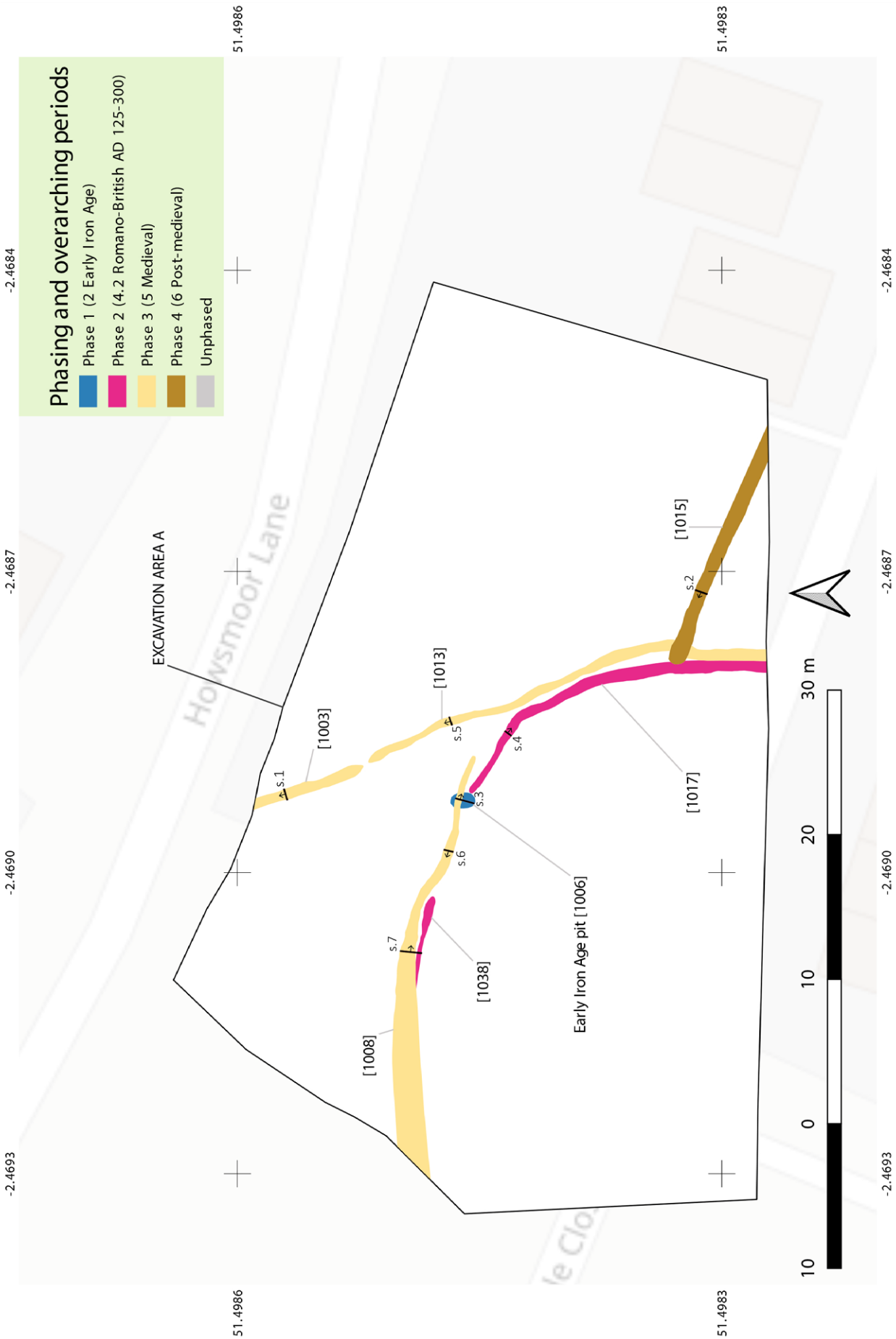
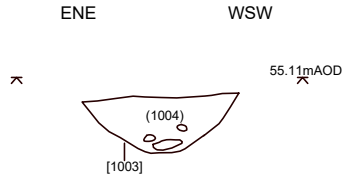
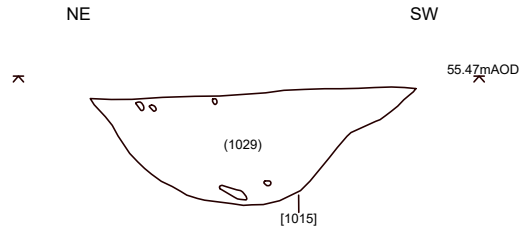


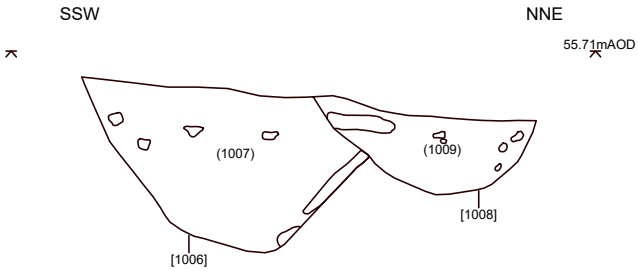
Figure 2.4 Archaeological features recorded within Excavation Area A by phase. © OpenStreetMap contributors



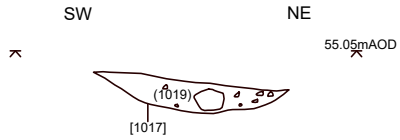
Section 1. NNW facing section across ditch [1003].



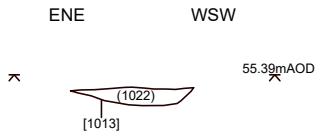
Section 2. North-west facing section across ditch [1015].



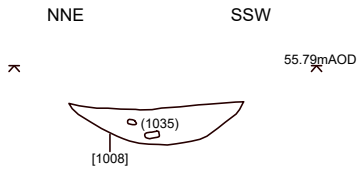
Section 3. ESE facing section across pit [1006] and ditch [1008].



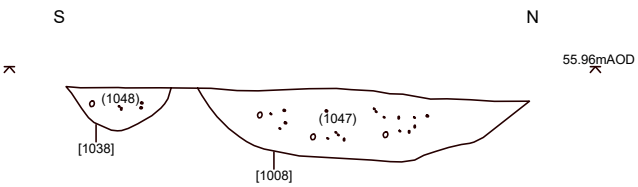
Section 4. South-east facing section across ditch [1017].



Section 5. NNW facing section across ditch [1013].



Section 6. WNW facing section across ditch [1008].



Section 7. East facing section across ditches [1038] & [1008].



Figure 2.5 Selected sections across archaeological features within Excavation Area A

each is equated with a chronological bracket. Figure 2.3 uses this interpretative schema to apply a colour coding to each of the phased chronological brackets. It displays the excavation areas together, so that the reader can visually appreciate which phases were broadly contemporary. A summary of the phasing for areas A to E follows and the phase plan produced for each area uses this same colour coding.

Within Excavation Area A the main archaeological features comprised ditches with a few isolated pits. Four phases could be recognised, extending from the Early Iron Age (an isolated pit) to the Post-medieval period. There was very little dating evidence and there is a possibility that some of the ditches may represent part of a post-Roman enclosure system (Figure 2.4).

In Excavation Area B the principal element of the recorded archaeological remains was a Romano-British villa with ancillary buildings and enclosures, consisting at its core of a 3rd – 4th century tripartite corridor winged villa (Figure 2.6 & Figure 5.7). These villa remains were very extensive and the site represents 'the largest Romano-British settlement discovered in South Gloucestershire that has been excavated under controlled, professional archaeological conditions' (Paul Driscoll, South Gloucestershire Council, letter dated 16/09/2015). To the east of the villa the remains of a probable bathhouse were found, comprising a large plunge pool cut into the bedrock and a stone-lined fire pit. A very large well was discovered next to this structure with a drainage culvert in between the two.

The earliest major phase was a Romano-British field system which pre-dated the construction of the villa. This was concentrated on the eastern, northern and western sides of the area. Some of these enclosure ditches had evidently been deliberately backfilled, seemingly as preparatory works for the construction of the villa complex. Others were re-used during the use life of the villa. Two corn drying structures were excavated, one of which clearly pre-dated the construction of the main villa building. Other economic activities indicated in the material evidence were iron smelting and sheep shearing.

Human remains were recovered from a set of Romano-British cremation burials. The main group of cremation pits was cut into the upper fills of an earlier ditch, located about 80m east of the main villa building. About 20m farther west, a smaller group of cremations pits was excavated just outside one of the ancillary buildings, within the corner of its enclosure. Both groups yielded some well-preserved ceramic vessels used as urns, which were block lifted and excavated at the Wardell Armstrong offices in Carlisle. The state of preservation varied greatly, and not all of the features excavated as cremation burials yielded human remains. A cist burial was also found to the north of the villa, just outside of its surrounding enclosure ditch, but also did not yield human remains. A group of non-cremated neonatal bones was also recovered from a demolition deposit associated with the bathhouse and was presumably not far from its original place of deposition. A Post-medieval kiln that truncated part of the villa was also recorded.

The archaeology recorded in Excavation Area C largely consisted of ditches, with a scattering of pits and postholes. There were eight identifiable stratigraphic phases. The earliest datable phase consisted of a field boundary ditch dated to the 1st century AD (Figure 2.9). The main features consisted of the ditches of a rectangular enclosure, which was later recut and extended. These enclosures appear to have originated in the 1st century AD and were superimposed onto an earlier system of ditches that may have originated during the Late Iron Age. After the establishment of the rectangular enclosure, a smaller G-shaped enclosure was established within it, positioned close to its eastern boundary. The remains exhibited evidence of a possible structure of the 2nd to 3rd century AD, which may have been a workshop area. Two large storage pits were located to the south of the G-shaped enclosure and a smithing hearth was excavated just to the north. The last phase of recorded archaeological features in this excavation area comprised stone-lined, Post-medieval drainage culverts.

Excavation Area D was quite densely filled with ditches for former fields and enclosures. These, along with two structures, constituted nine stratigraphic phases (Figure 2.11). The earliest phases appeared to date to the 1st-2nd centuries AD and the last was Post-medieval in date. A large D-shaped enclosure was observed on the top of the ridge on the northwest corner of the area. Several large boundary and drainage ditches were concentrated near the base of the ridge following the contours, with some that ran down the slope. The remains of a Roman building were recorded on the eastern side of the D-shaped enclosure. A cist grave was found in the northwest corner and a cremation burial also was found, cut into an early enclosure ditch, close by. The Roman building may have been the farmstead which preceded the later 3rd to 4th century villa. There were pits scattered throughout the site, mostly within the D-shaped enclosure. These may represent habitation associated with the D-shaped enclosure. In the final phase of activity several stone-built Post-medieval culverts crossed the site.

Within Excavation Area E the main archaeological features were ditches associated with the Romano-



Figure 2.6 Archaeological features recorded within Excavation Area B by phase. © OpenStreetMap contributors

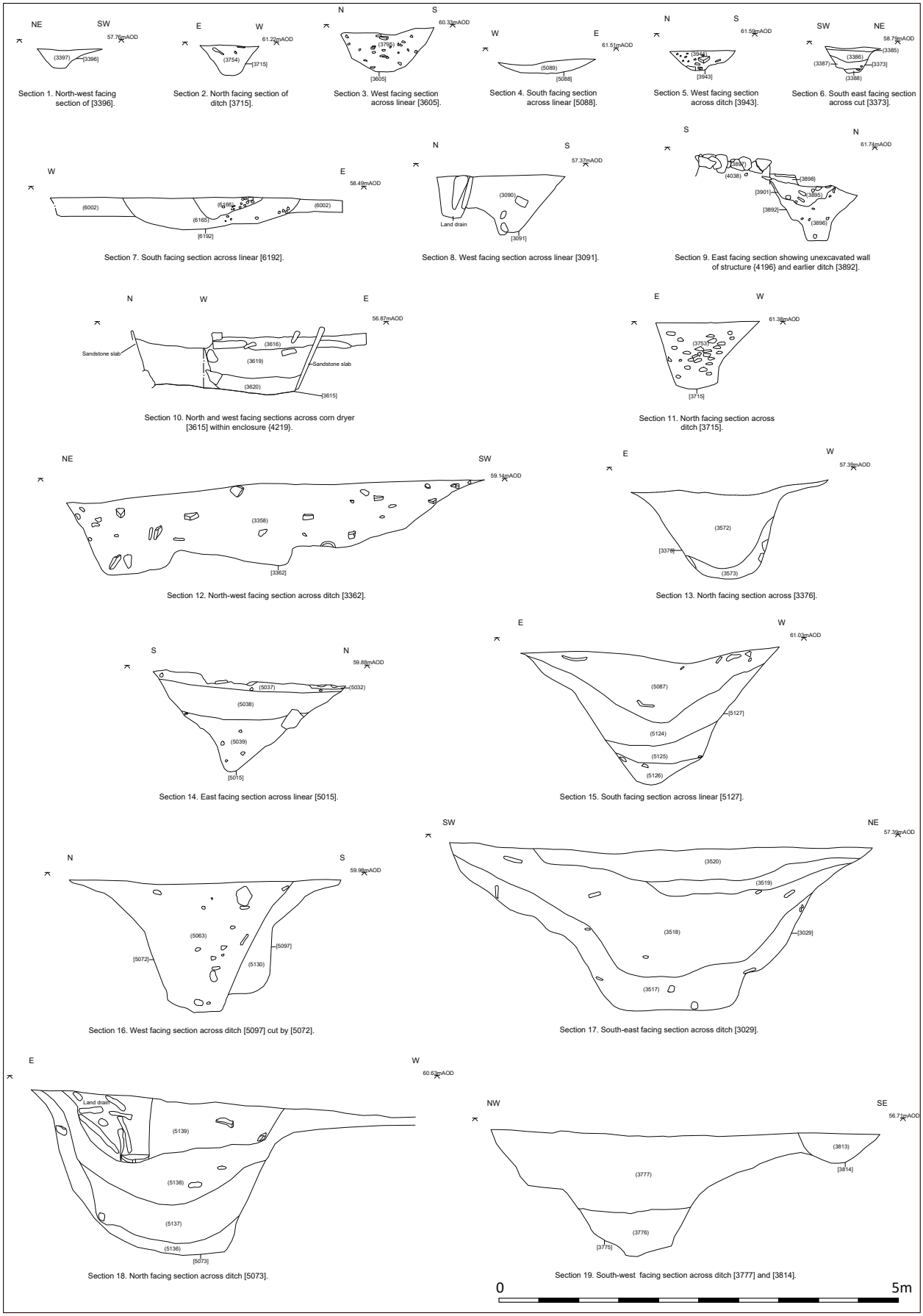


Figure 2.7 Selected sections across archaeological features within Excavation Area B (1)

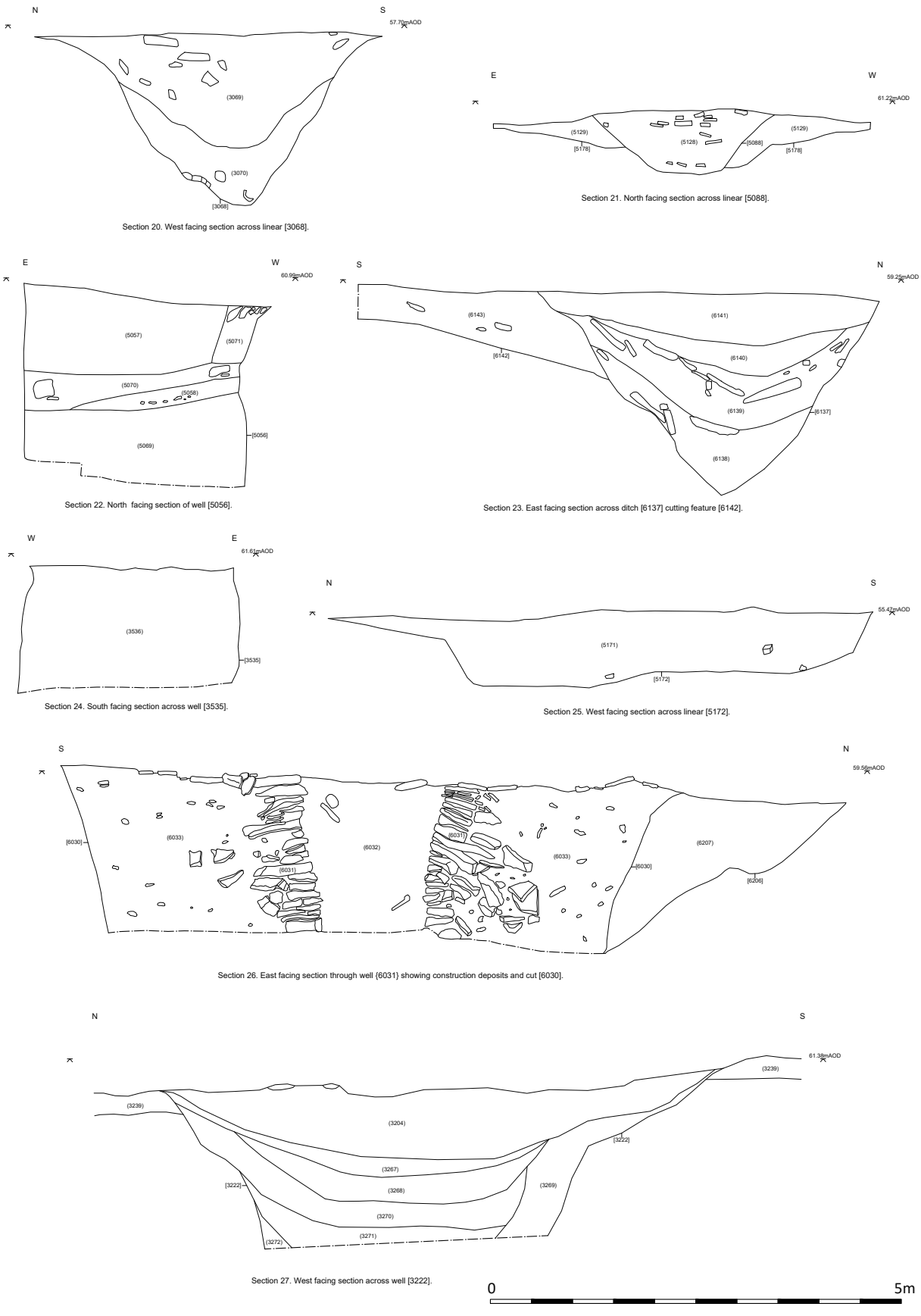


Figure 2.8 Selected sections across archaeological features within Excavation Area B (2)

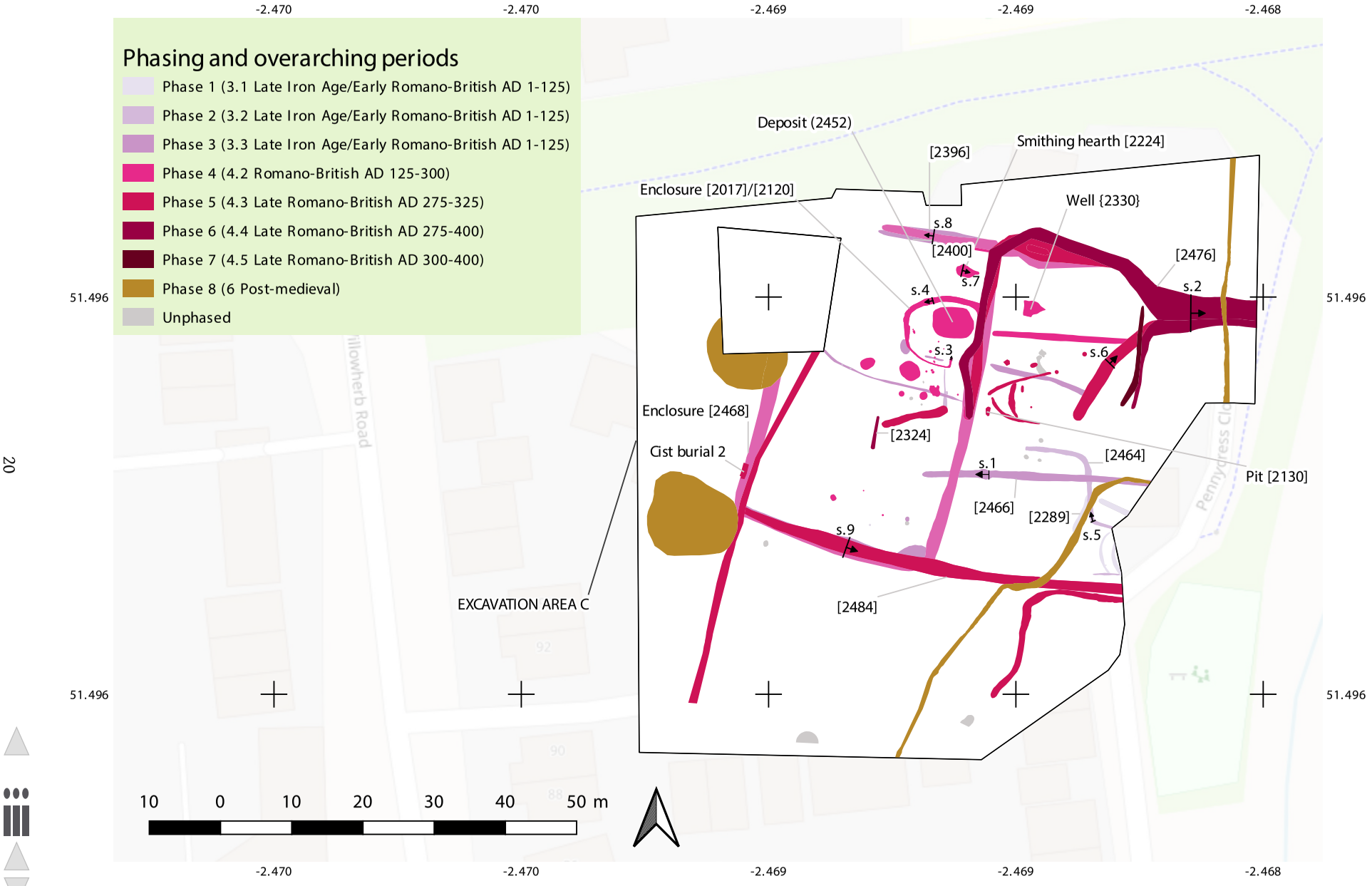


Figure 2.9 Plan of archaeological features within Excavation Area C by phase. © OpenStreetMap contributors

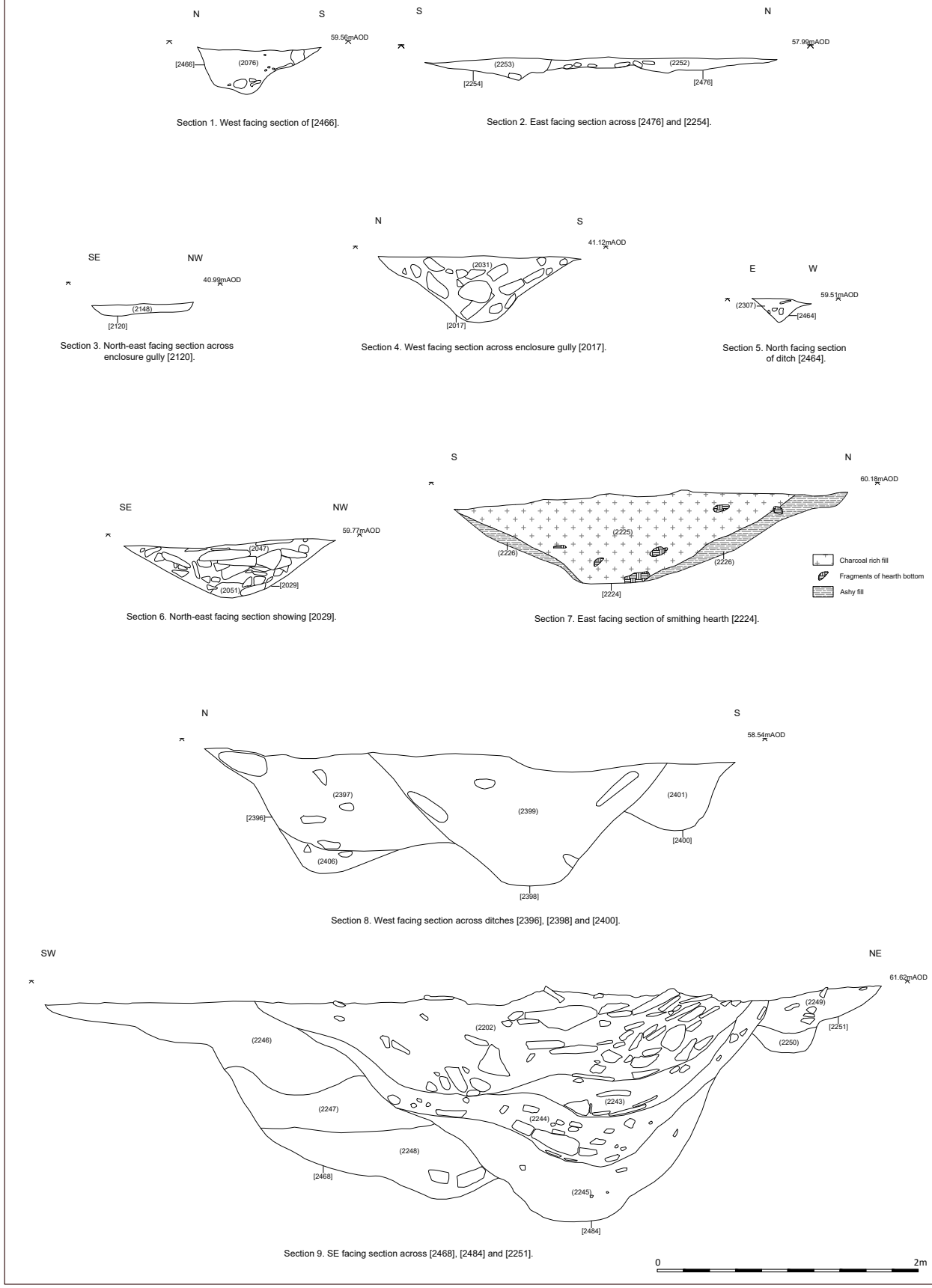


Figure 2.10 Selected sections across archaeological features within Excavation Area C

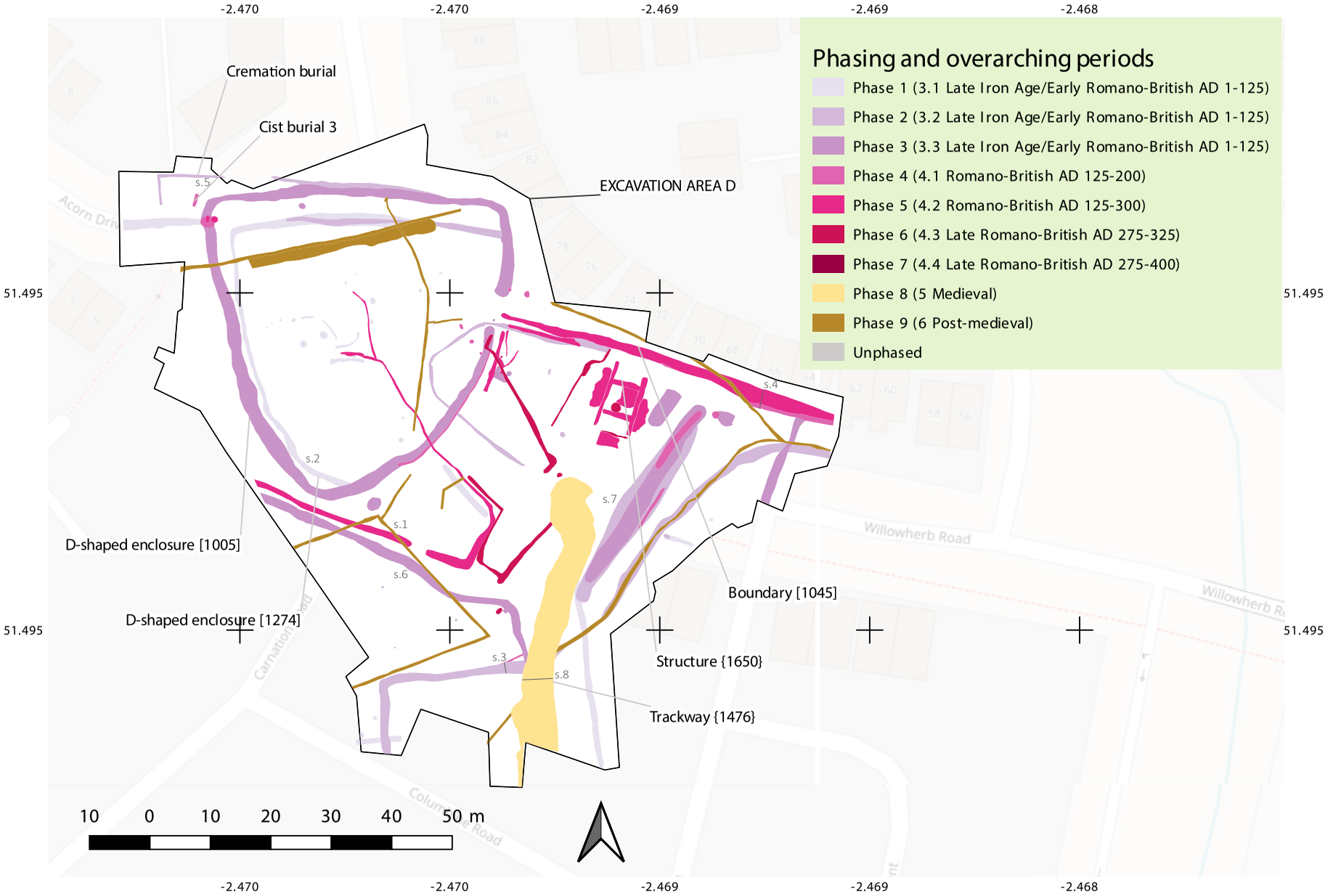


Figure 2.11 Plan of archaeological features within Excavation Area D by phase. © OpenStreetMap contributors

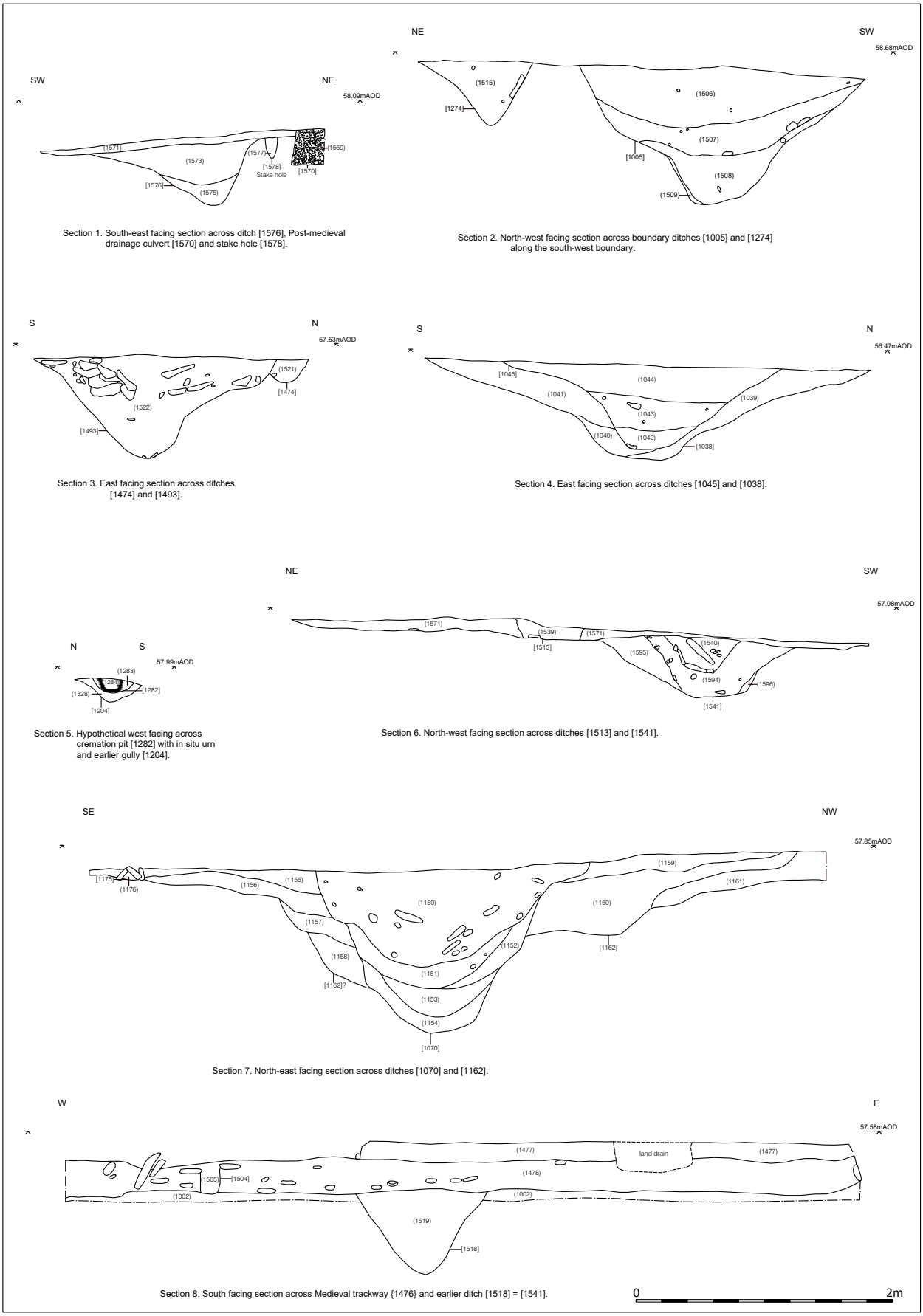


Figure 2.12 Selected sections across archaeological features within Excavation Area D

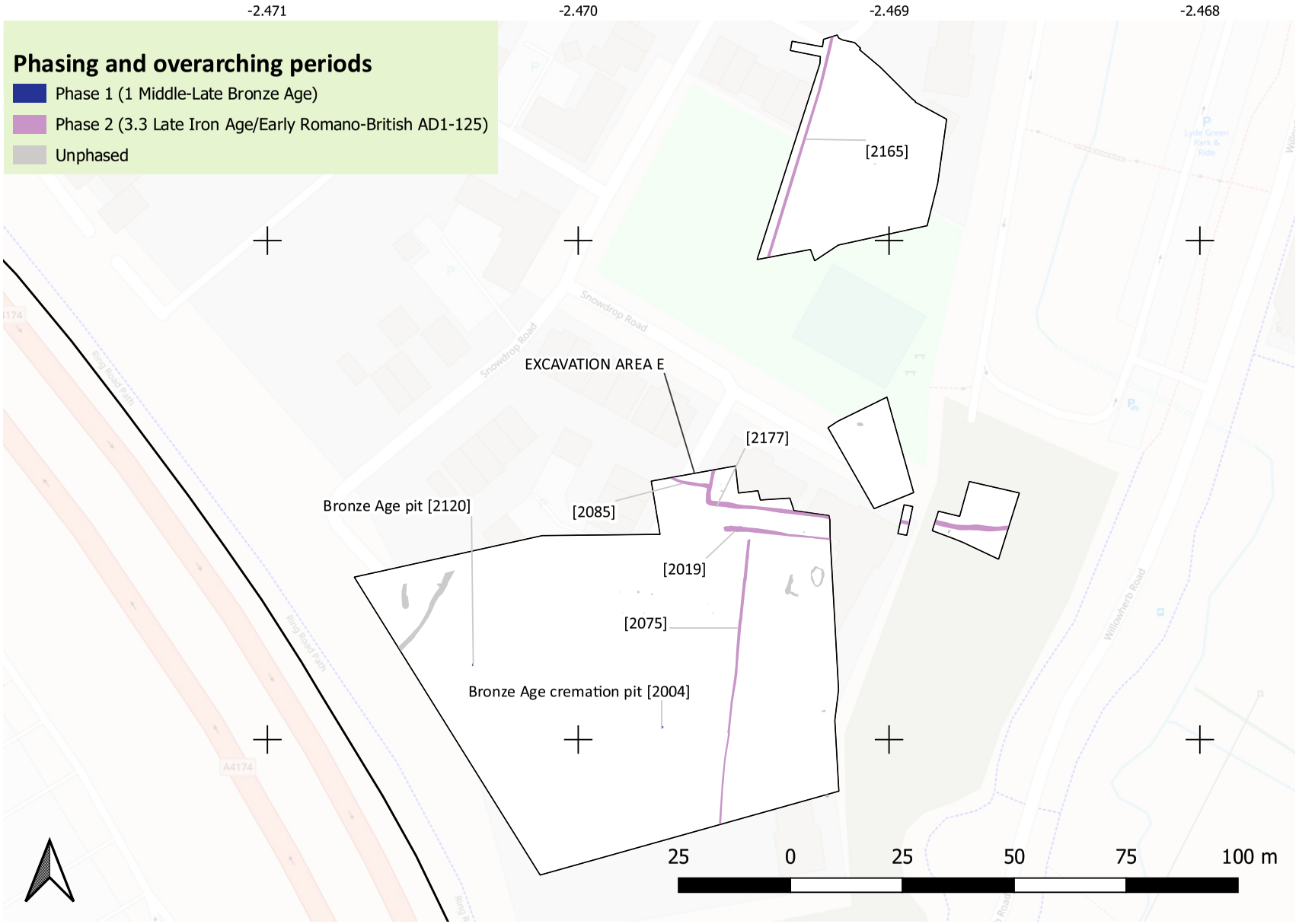


Figure 2.13 Plan of archaeological features within Excavation Area E by phase. © OpenStreetMap contributors

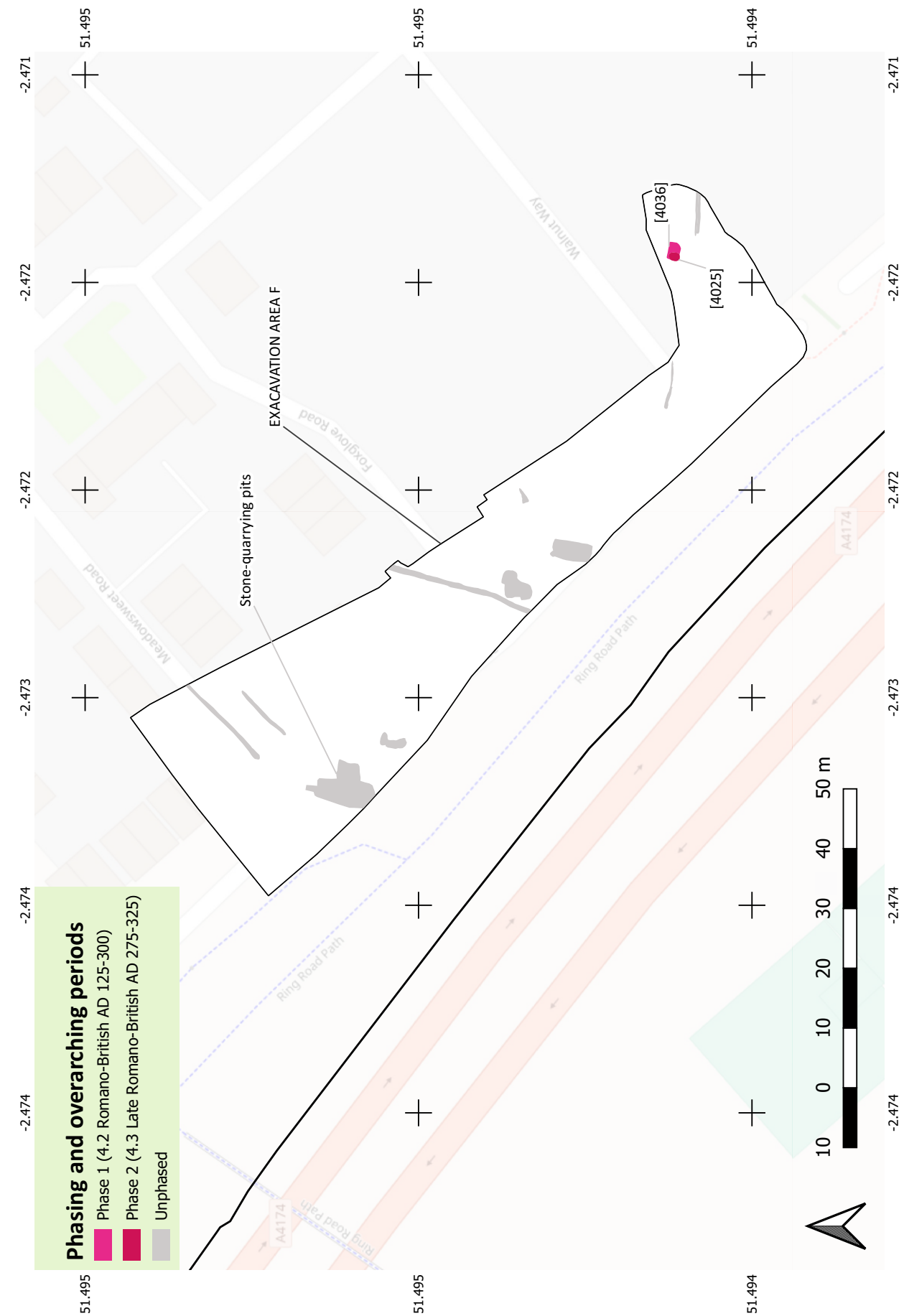


Figure 2.14 Plan of archaeological features in Excavation Area F by phase. © OpenStreetMap contributors

British occupation site. Isolated postholes, pits and a possible ring ditch were also recorded (Figure 2.13). Two Bronze Age pits were recorded. The first, found during the trial trenching, contained an urned cremation. The second contained three sherds of a pottery vessel. There were very few stratigraphic relationships between the features in Excavation Area E, leaving the stratigraphic phasing as a simplistic division between the Middle to Late Bronze Age pits and the Late Iron Age/Romano-British field system.

In Excavation Area F five linear features were revealed relating to former field boundaries. Four small quarry pits and some other more ephemeral features were also recorded (Figure 2.14). While two shallow pit features, [4025] and [4036], did yield small fragments of Romano-British pottery, the lack of stratigraphic relationships and the general absence of datable finds in the deeper features makes both phasing and dating difficult. Consequently, following assessment of the archive for Area F, it was decided that no further analysis of the material would be undertaken.

Chapter 3

The development of the landscape before the 1st millennium AD

Robert Young and Richard Newman

with contributions by
Adrian Bailey, Kimberley Colman, Lynne Gardiner, David Jackson,
Mike McElligott and Megan Stoakley

This chapter summarises the small quantity of evidence recorded within the Lyde Green excavation areas for human activity prior to the establishment of the Late Iron Age/Romano-British settlement, which forms the focus of later chapters. Aside from three discrete pit features, two of Bronze Age and one of Early Iron Age date, the evidence is constituted by residual or unstratified artefacts. It appears that land division within the Lyde Green area, manifested as ditched plot boundaries, only occurred at the very end of the last millennium BC.

3.1. Neolithic stone axe

The earliest artefact from the excavations at Lyde Green was the head of a Neolithic hafted stone axe (SF 23, Figure 3.1). The Roman context from within which this object was found has led to it being explained as a possible curated object. Such a singular object may not be locally derived and need not be of any relevance to contemporary land use (Adkins and Adkins 1985: 69). No other artefacts, ecofacts or features of a definite Neolithic date were encountered during the archaeological investigations.

The axe, SF 23 (Figure 3.1), weighs 248g and measures 115.38 mm (length) x 54.85 mm (width) tapering to 37.5 mm (basal end). The maximum thickness measures 26.30 mm.

The piece is largely bi-convex in section, but one surface is slightly flattened, with rounded lateral edges and a roughly sub-oval section. It tapers from the rounded cutting edge to the butt end. The concave cutting edge displays minimal, possibly post-depositional, damage.

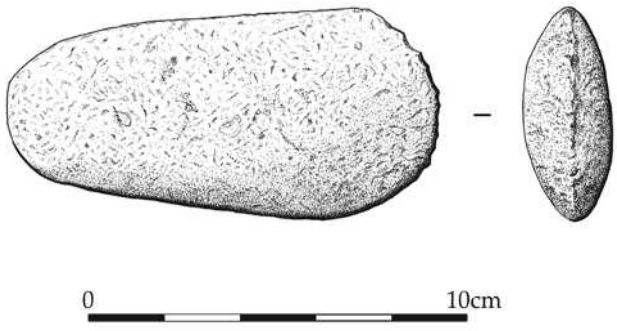


Figure 3.1 Neolithic stone axe (SF 23)

The axe has been produced by peck dressing, on a grey-green medium-coarse grained rock. On one surface a smoothed, and slightly hollowed, area is visible, and this may relate to the hafting of the implement.

Without detailed petrological/thin section analysis it is impossible to identify the petrological group to which the rock belongs and hence its source location. Writing in 1979, however, the geologist G.R. Coope discussed 'The Influence of geology on the manufacture of Neolithic and Bronze Age stone implements in the British Isles' (1979: 98-101). In this contribution, he distinguished two traditions used in the manufacture of Neolithic and Bronze Age stone implements. 'One was essentially a flint technology that involved the selection of rocks with similar physical properties to flint. . .'. The second technique was largely based on pecking and involved the selection of quite different rocks – most usually moderately coarse basic igneous rocks that did not flake when struck with a hammer' (1979: 98).

This last category of rocks are usually described as uralitrized gabbros, epidiorites, picrites or greenstones and the bulk of their component minerals are largely similar (Coope 1979: 99). An examination of the axe, under X10 magnification, in daylight conditions, revealed the presence of feldspar, but the darker minerals, which could be augite or hornblende, could not be identified with any certainty.

Coope produced a table of petrological groups of Neolithic and Bronze Age implements arranged according to their techniques of manufacture (1979: 100, Tab. 1). In this he identified four major petrological groupings, all with Cornish sources, that were exploited in the production of Neolithic axes using the pecking technique. These were: Group I: Utralitized Gabrro (source in Mount's Bay area, near Penzance); Group II: Epidiorite or Greenstone (source near St. Ives); Group III: Epidiorite or Greenstone (source near Marazion) and Group IV: Altered Picrite (source near Callington).

It is highly likely that the Lyde Green Axe belongs to one of these petrological groups.

The context of the axe's recovery is interesting. Context (3284) is part of Romano-British Structure {4226}. It is one of several layers of demolition (3347, 3415, 3452, and 3284) recorded in the north-west corner of the structure and possibly due to wall collapse. It is suggested that some of the stone had been used to level up the ground (McElligott 2014b: 161-162).

Clearly, the piece was recovered from specifically Roman contexts and the occurrence of Neolithic axes from Roman sites in Britain has been the subject of research by Adkins and Adkins (1985: 69-75). They recorded some 40 examples from well stratified Roman contexts on a variety of site types. Usually these have been written off as 'residual' finds but, as Adkins and Adkins point out, there is good evidence from continental Europe for the use of Neolithic flint and stone axes as curated, votive, offerings and that the finding of Neolithic axes on Roman sites is not necessarily indicative of Neolithic activity in the locality. They discuss the fact that Neolithic axes may have been used as lucky charms and 'ritual objects' especially when they have been found at known Roman ritual sites (Adkins and Adkins 1985: 69). This phenomenon, they suggest, may well have its origins in pre-conquest belief systems.

Writing in 1951, J.S.F. Stone discussed a stone axe found during the excavation of Iron Age settlements on Boscombe Down West in Wiltshire (In Richardson 1951). In his report he discussed the significance of axes in contexts of various dates. He recalled the cult use of axes in the Neolithic period itself and suggested that the ritual use of axes in later periods might be a survival of an early folk memory (1951: 163). As Adkins and Adkins have argued, this may not be as incredible as it at first seems. They note the practice of incorporating axes as 'thunderbolts' in the walls of houses, possibly originating in the Neolithic period, and certainly continuing up to the present day (Adkins and Adkins 1985: 70; Clark 1937: 457; Harland 1879).

The occurrence of the Lyde Green axe in the context of material from the collapse of a wall in a Roman building, as noted above, may be another example of this practice. Its occurrence cannot, however, be taken as definitive evidence of Neolithic activity in or near to the Lyde Green site. The object may have been an import, especially if its use in the Romano-British period was a deliberate and meaningful act.

3.2. Bronze Age pits

During the evaluation of Area E a small circular pit [2004] was excavated within Trial Trench 20. The pit was 0.17m wide and contained the base of a cremation urn, with a cremation deposit within it (2005) (Figure 2.13). The cremation pit and urn had clearly been truncated by later ploughing, only surviving to a depth of six centimetres. From the fragmentary remains the urn has been identified as a barrel-, or bucket-type vessel, probably of Late Bronze Age date. The pottery's poor condition and lack of decorative elements makes a definitive identification and attribution difficult (Section 3.3: Vessel 4). It seems most likely that this was an isolated burial and there was no evidence of an associated mound having covered the burial or of any other feature associated with the cremation pit.

The cremation deposit within the vessel contained 16 fragments of human bone, which had a total weight of 25g (Bailey 2013, 19). Whilst it is tentatively suggested that the remains originated from a juvenile or subadult, refined age estimation was not possible due to the small quantity of bone and its poor condition. Of the identifiable fragments, two were cranial, one was maxillary, four were lower limb bones, one belonged to an upper limb and one to a vertebra. The bone was in a fairly fragile condition, with rounded edges and a chalky, friable texture. The fragment size varied from *c.* 5mm to 20mm in length and none constituted more than 10% of an entire bone. Warping as a result of dehydration was present on the bone fragments and all pieces were calcined white, which is indicative of an effective pyre temperature. No pathologies or trauma were observed.

A further pit, initially presumed to be a cremation, was found during the subsequent excavation of Area E, approximately 43m to the north-west of pit [2004]. It was a sub-oval shape in plan, measuring 0.58m by 0.28m and 0.16m deep. The pit [2120] had near-vertical sides and a flat base. Both the sides and base were lined with flat sandstone slabs. Overlying the base slab was a clay fill 0.04m deep (2134), containing flecks and small pieces of charcoal and some burnt sherds of pottery. The remains of a pot appeared to sit on top of this deposit. The pottery sherds were contained within a fill (2126) that included numerous flecks of charcoal and fragments of burnt clay. When analysed the pottery sherds were found to be the remains of three barrel or bucket-like vessels of Middle to Late Bronze Age date. A radiocarbon date of 3399±41 BP (UBA-36892) was obtained from charcoal from fill (2126). The charcoal dated, however, was of oak, which being a long-lived tree can give misleading dates. This is because the oak charcoal may have been derived from a sample of old wood when it was burnt, as oak heartwood can be many centuries old when a tree is felled. Consequently, rather than the radiocarbon date being indicative of an Early Bronze Age deposit, it may be that a Middle Bronze Age date is more likely, consistent with the suggested dating of the pottery from fill (2126).

Table 3.1 Human remains recovered from Bronze Age Vessel 4

Element	Pres.	Frag. size (mm)	Count	Wgt (g)	MNI	Age	Sex
					1	Juvenile	Indeter.
Ulna?	Poor	23x9x2	1	3			
Vertebrae	Poor	16x15x8	1	5			
Fibula??	Poor	22x9x5	1	1			
Lower Limb	Poor	Each *c.* 20x15x4	3	7			
Cranium	Poor	21x16x2, 13x11x5	2	2			
Maxilla (2 teeth)	Poor	22x8x8	1	3			
Unidentifiable	Poor	<20	7	4			
			16	**25**			

Pit [2120] does not appear to have been a cremation pit, there was no pyre debris or cremated bone. There were three separate vessels contained within the stone-lined pit which appear to have been sat upon a burnt deposit. It is possible that the pit was used for cooking, although there was no evidence that the sandstone liners had been heat-affected and no burnt stones within the deposit.

No further evidence of Bronze Age domestic activity was recorded within Area E, or in any of the other excavation areas. Neither was there any evidence of Bronze Age burial, other than the one cremation discovered during the evaluation phase and described above. Pit [2120] and cremation pit [2004] are not necessarily contemporary, as the features are neither physically or stratigraphically associated and the character of the pottery from the features, if not the type of vessel, were very distinct (Section 3.3).

3.3. Bronze Age pottery

Robert young

The assemblage

Within Area E, 294 pottery sherds (including 269 body sherds, 18 base sherds and 7 rim sherds), weighing 1074g were recovered from the fills of the two Bronze Age pits described above. The first of these pits [2004] was found during the evaluation, the second [2120] during the open-area excavation. In total the assemblage may represent up to four possible Bronze Age vessels, though given the generally undifferentiated character of the material it is difficult to be certain of vessel numbers (Appendix 1). Potential vessels have been differentiated on the basis of similarity and variation in surface finish. All the sherds are undecorated and probably come from straight-sided bucket or barrel-shaped vessels. It is most likely that the vessels are of Middle or Late Bronze Age date, though the pottery is not highly diagnostic.

The pottery from the upper fill [2126] of stone-lined pit cut [2120] forms the greater part of the assemblage. All vessels are hand-built. Vessel 1 exhibits an orange/red oxidized outer surface with a grey/black core and inner surface. Several sherds are very reddened and oxidized on the outer surfaces, with some spalling evident. Vessel 2 has orange/brown oxidized inner and outer surfaces and a black/grey core. Vessel 3 exhibits mainly reduced external and internal faces with a reduced core (Plate 3.1) and Vessel 4 has an orange/brown oxidized outer surface with a black/grey inner surface and core. The internal surface of Vessel 4 has been wiped and smoothed, but no surface decoration is evident on any of the vessels.

Table 3.2 The Bronze Age pottery: sherd count, vessel form and context

Area	Context	Vessel no.	Vessel form	Base sherds	Body sherds	Rim sherds
Area E	2126	1	Barrel/Bucket	1	177	-
Area E	2126	2	Barrel/Bucket	-	38	-
Area E	2126	3	Barrel/Bucket	-	23	7
Trench 20	2005	4	Barrel/Bucket	17	31	-
Total				18	269	7

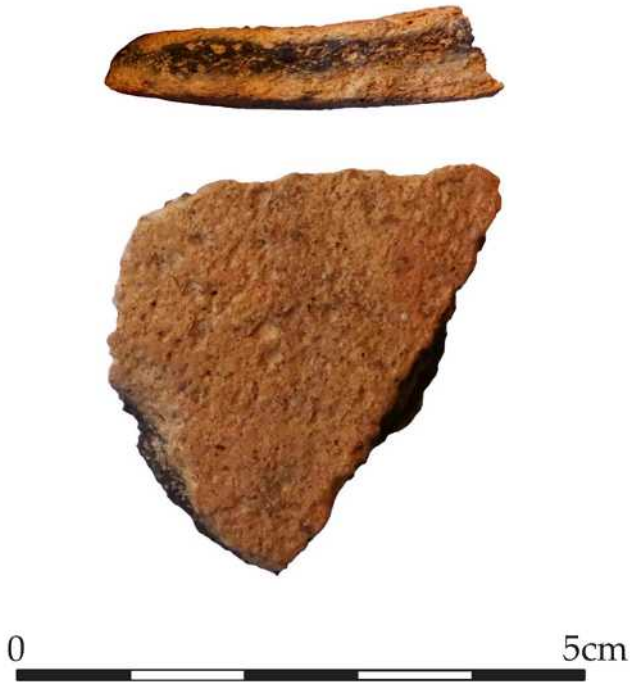


Plate 3.1 Sherds of Bronze Age pottery, Vessel 3

Fabric types

Two fabric types were identified in this small Bronze Age pottery assemblage:

Fabric 1: sandy, slightly vesicular matrix with rare, rounded quartz particles, some possible iron oxide-like particles and some small grey inclusions.

Fabric 2: vesicular outer and inner surfaces, where inclusions have fallen out of the body matrix, laminar internal structure. The fabric is light with a soapy feel and the matrix is fine with some small, rounded/ angular, polished, quartz grains; small angular black grits and some angular, grey fragments present in addition to rare quartz sand grains and possible small grog particles. Fabric 4 is similar, in terms of inclusions, to the range of fabrics identified in the Iron Age ceramic assemblage from the site.

Vessels 1, 2 and 3 from context [2126] all share the same basic fabric (Fabric 1) while that of Vessel 4 is clearly different (Fabric 2).

Rim forms

Seven rim fragments were recorded, all from Vessel 3. Two of these are conjoining. The rim is small and slightly everted, with a flattened top and slight internal rim bevel. The fragments are too small to allow calculation of the rim diameter.

Abrasion and fragmentation

Abrasion is one of the few measurable indicators of the use of pottery between the breakage of a pot, and the deposition of the sherds. As Miket *et al.* (2008: 31) have argued, it relates to the interval between the original use of a pot and its archaeological recovery. The methodology developed by Sørensen (1996) to assess ceramic abrasion has been applied here to examine the Lyde Green pottery. Sørensen identified four levels of abrasion: 1. None or very little abrasion — very fresh breaks, un-patinated core colour, sharp edges, very rough texture, and extruding grains of temper. 2. Low abrasion — edges maintain sharpness, but markedly extruding edges and temper are worn, core colour generally still fresh but texture is slightly smoother. 3. Medium abrasion — points and edges are now worn blunt, temper no longer extrudes, texture of core noticeably smooth, core colour is dull or patinated. 4. High abrasion — sherd is heavily rolled: surfaces have receded from core and core worn smooth, presenting a rounded effect.

All vessels under study exhibit medium/high abrasion and the sherds are also highly fragmented. It was, however, possible to reconstruct most of the base of Vessel 4, which survived semi-intact in the ground. The material may well have been deposited in the pits in in the condition in which it was recovered. It must be remembered however that the pits themselves were also heavily truncated by later agricultural activity.

Dating

It is difficult to date this assemblage of material. The straight-sided form of all the vessels may be indicative of a Middle to Late Bronze Age date, and the rim form of Vessel 3 may also indicate a similar dating. The Early Bronze Age radiocarbon date, possibly from old wood, associated with Vessels 1-3 suggests a Middle rather than Late Bronze Age date. Vessel 4 shares features of fabric and surface finishing with the pottery from the site made in the Iron Age tradition, though the vessel type is similar to Vessels 1-3. A Late Bronze Age date is tentatively suggested for this vessel and therefore the cremation burial.

Possible parallels

Published examples of Middle to Late Bronze Age pottery in the area are hard to find. The Lyde Green assemblage, especially Vessels 1-3, may be representative of what is known as 'Post-Deverel-Rimbury Plain Ware' (Fitzpatrick 2008: 126). Barber *et al.* have identified later Bronze Age undecorated wares from Stoke Park Hospital in Bristol (Barber *et al.* 2006: 59-62), though this was tempered with calcite and grog pellets. They drew

parallels between this material and finds from Cabot Park, North of Avonmouth (Mepham 1998), Combe Hay, Bath (Price and Watts 1980) and Chapeltump, Magor, on the Monmouthshire coast (Lawler *et al.* 2000).

Later Bronze Age pottery with a similar rim form to Vessel 3 has also been recovered from the excavation of a burnt mound at Sandy Lane, Charlton Kings, Gloucestershire (Timby 2001: 67). Further afield, Barclay *et al*. have recorded bucket urns that were possibly of similar form from a ring-ditch cremation cemetery at Shorncote Quarry, Somerford Keynes, Gloucestershire (Barclay *et al.* 1995). Earlier excavations at Shorncote Quarry have also produced potentially similar material (Morris 1994: 34-53) and work at Spratsgate Lane, also in Somerford Keynes, has produced a small amount of Late Bronze Age pottery (Vallender 2007: 53).

3.4. Lithics

Beyond Excavation Area E there were no features noted during Wardell Armstrong's archaeological investigations at Lyde Green that could be dated earlier than the Iron Age. Nevertheless, there was some evidence of pre-Iron Age activity in the area from the artefact assemblage collected from Areas A-E. No artefacts of likely prehistoric date were recovered from Area F (Churchill 2013: 24-26). From Areas D and E, in the south of the investigation zone, 22 lithic artefacts were recovered, either unstratified or as residual elements within later finds assemblages. Of these only 13.6% of the assemblage comprised modified components, the remainder consisting of debitage. The modified pieces were a side-scraper, a side and end scraper and a likely micro-scraper (McElligott 2014a: 88). It was concluded, following analysis of the assemblage, that most of the lithics were undiagnostic but that there may be a Mesolithic component represented by the micro-scraper. It was considered possible that all three scrapers were of Mesolithic derivation, though it was conceded that such tools are common components of later assemblages, especially during the Bronze Age (McElligott 2014a: 89). On balance, given the Bronze Age pottery from Area E, it may be prudent to consider this assemblage as most likely of Bronze Age derivation. However, such a conclusion provides little independent evidence of Bronze Age activity to add to that of the pottery from the two pits in Area E.

From excavation areas A, B and C a similar, though larger, flint assemblage was recovered. The assemblage totaled 92 lithic artefacts, retrieved as either unstratified or as residual elements within later finds groups. Only 6.5% of the assemblage comprised modified components, the remainder being debitage. The modified pieces were a blade fragment, a bladelet, one scraper and two modified flakes (McElligott 2014b: 264-265). It was concluded that most of the material was undiagnostic but that elements of the assemblage suggested a Mesolithic derivation and that other components may be indicative of Neolithic and/or Bronze Age activity. Overall it appears the widespread lithic assemblage accumulated over a lengthy time span.

The raw material for the entire assemblage comprised either a toffee coloured flint, a mottled black flint or less frequently a grey flint. Black flint dominated the assemblage from Areas D and E, whereas toffee coloured flint was most common in Areas A to C. This differentiation may be suggestive of different time periods of flint derivation between the flint assemblages in the north of the Lyde Green study area and the south, with different flint sources being used at different times. The numbers of lithics recovered, however, would render any analysis invalid statistically. The presence of a thick chalky unrolled cortex on several pieces suggests that the raw material was at least in part gained from a fresh outcrop rather than from a derived secondary context such as gravel or clay deposits (McElligott 2014a: 89). This indicates that some of the assemblage comes directly from chalk strata, the nearest of which are in Wiltshire.

The lack of features attributable to a pre-Iron Age date meant that no samples containing palaeobotanical ecofacts, nor any of the zooarchaeological remains could be attributed to a pre-Iron Age origin. Consequently, there was no palaeoenvironmental data to assist in the understanding of pre-Iron Age landscape exploitation.

3.5. Overview of the pre-Iron Age evidence

Artefactual evidence has provided tentative indications of activity within the local landscape during the Mesolithic and Neolithic periods, but other than the Neolithic axe head, which was perhaps a Romano-British curated object, there is nothing that can definitely be attributed to these periods. The earliest datable archaeological feature on site is a possible Bronze Age cooking pit [2120].

Whilst the pottery from pit [2120], from parallels and perhaps the associated radiocarbon date, is most likely to be of a Middle Bronze Age date, this is probably not the case for the vessel from cremation pit [2004] (see Bronze Age pottery report above). The cremation vessel was very distinct in fabric and surface finish from the vessels in pit [2120]. From parallels and the similarity in fabric inclusions and surface finish of the cremation vessel with some of the Iron Age pottery from Lyde Green, it is more likely that the cremation dated to the Late Bronze Age at the earliest.

There is no evidence pre-dating the Iron Age for long-term settlement, or sub-division of the landscape; even so, probably from at least as early as the Mesolithic

period, there is evidence for people moving through the landscape. At least temporary occupation of the local landscape including the burning of presumably local wood resources, is evident from no later than the Middle Bronze Age. By the Later Bronze Age the internment of cremated individuals was taking place with all the implications for local long-term settlement and the marking of possession and territorial divisions which that may imply. The general indication from the depth of some of the surviving archaeological features of the Late Iron Age and Romano-British period is that in certain areas a considerable depth of deposit had been lost over the centuries. If they had once been present, traces of shallower features relating to prehistoric, perhaps unenclosed, settlement may have been lost.

3.6. An isolated Early Iron Age pit

There was no obvious continuity between the Late Bronze Age activity noted within Excavation Area E and the Early Iron Age, apart from a truncated pit [1006] in Excavation Area A. Sample material from the pit yielded three radiocarbon dates with a date range of 755-401 BC, probably indicative of a 7th to late 6th century BC date (*Salix/Populus*, Appendix 2). The pit contained nine fragments of iron slag, recovered from near its bottom. It was circular in plan, with a diameter of 1.1m and a depth of 0.46m. The pit had steeply sloping sides and a flat base, five large flat stones, three on the base, suggest that the pit was lined. There was no evidence for burning or heating from within the pit. This feature's function remains unknown and no other associated features were observed (Figure 3.2). Not a single datable artefact indicative of Early Iron Age activity was recovered from any of the excavations and areas A, E and F were otherwise devoid of Middle or Late Iron Age artefacts.

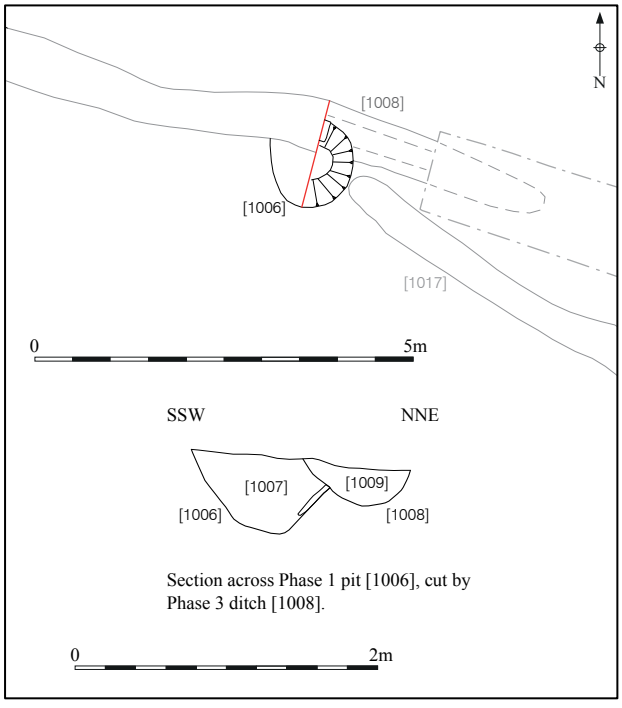


Figure 3.2 Excavation Area A, phase 1 pit [1006]

3.7. Conclusion: Lyde Green before the 1st millennium AD

Indications for Mesolithic and Neolithic activity at Lyde Green are sparse and ephemeral. Little can be made of the slim evidence. The earliest indications of occupation and clear exploitation of the local landscape come from the Early Bronze Age. There is a similar level of activity within the local area from the Middle Bronze Age through to the end of the 1st millennium BC. Evidence of the subdivision of the landscape by ditched boundaries is not demonstratable until the Middle to Late Iron Age, and probably towards the end of that period. Bronze Age and Iron Age evidence is not plentiful, but it is widespread. Activity seems relatively continuous, though there may have been something of a hiatus during the Early Iron Age.

The evidence suggests nearby settlement, even if no evidence has been forthcoming within the investigation zone. Clearly, however, settlements were close by. The local inhabitants were farming, processing food, dividing the landscape, burying their dead and from the Early Iron Age working iron within the investigation zone. There is very little evidence from the surrounding parishes of later prehistoric settlement. Worked stone finds of Late Neolithic to Bronze Age date were found near Cosham Street, Mangotsfield (Parry 1997), but no evidence of Bronze Age settlement has been found from within the vicinity of Lyde Green. This need not surprise as the relatively ephemeral nature of such settlement and the persistence of arable farming in more recent periods may have removed or obscured such evidence, as noted in the National Mapping Programme for the Cotswold Hills and Thames valley (Janik *et al.* 2011: 30). Indeed, it is generally considered that Neolithic and Early Bronze Age settlement in much of the South-West may have been quite mobile and short-term with sedentism being the exception rather than the norm (Pollard and Healy 2008: 80).

Whilst at Lyde Green the evidence of human activity in the local landscape appears to intensify from the Middle Bronze Age into the Iron Age, there remains a lack of evidence for permanent settlement and the subdivision of the landscape. Elsewhere in the South-West region this appears to be the period when evidence is more forthcoming for more substantial settlements and the bounding of territories (Fitzpatrick 2008: 117).

Iron Age settlement too is lacking from within the immediate vicinity of Lyde Green, but then knowledge of such settlement evidence is generally lacking in the Bristol area (Moore 2006a: 73). It is possible that a sub-circular earthwork HER 7139, which appears to pre-date the parish boundary between Pucklechurch and Westerleigh, may be of later prehistoric origin. Otherwise the only clear evidence of local Iron Age settlement is the bivallate hillfort at Bury Hill Camp, Winterbourne Down (NHL 1007023), some 2.7km to the north-west of Lyde Green (NGR ST 6521 7911). Partially excavated in 1926, this hillfort primarily produced evidence of a Romano-British date, but some burnished, hand-made Middle to Late Iron Age pottery was identified (Davies and Phillips 1927: 11), including a few sherds of Belgic ware (NHL 1007023).

The chronological pattern of activity exhibited in the Lyde Green landscape for the 2nd and 1st millennium BC is not atypical of the archaeological evidence for landscape development in Gloucestershire and the wider South West. There is little evidence for Late Bronze Age permanent settlement within the Bristol district (Jones 2006: 190), though that is almost certainly a result of a current absence of evidence rather than evidence of absence. Tom Moore notes that, beyond sites such as Crickley Hill, there is a lack of evidence for earlier Iron Age settlement within the Severn-Cotswold region (2007: 260). Local to Lyde Green the hill-top site at Kings Weston is of Early Iron Age date (Fitzpatrick 2008; Rahtz and Brown 1957). Generally, in Gloucestershire and in the wider South-West, evidence of land-use and settlement becomes more prolific from the 4th century BC onwards, though knowledge of Late Iron Age occupation in the Bristol vicinity is limited (Moore 2006a: 72-73). By the Late Iron Age the Gloucestershire region is considered to be densely settled, with farmsteads often set within rectilinear enclosures (Fitzpatrick 2008: 131).

Chapter 4

Dating the origins of the rural settlement at Lyde Green: a Late Iron Age enclosure system?

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with contributions by
Lynne Gardiner, Mike McElligott, Ed McSloy and Megan Stoakley

This chapter aims to describe the archaeological evidence recorded at Lyde Green for the late pre-Roman Iron Age. In historical terms this is roughly the period between Julius Caesar's two excursions to Britain in 55 and 54 BC and the Claudian conquest, begun in AD 43. However, archaeological dating brackets, commonly produced through the association of datable coins with diagnostic ranges of artefacts, rarely correspond neatly with such historical dates. The radiocarbon calibration curve for the Late Iron Age and Early Roman period also produces a rather wide date range, which does not help to pin our dating down more accurately. Indeed, in the absence of Bayesian modelling of multiple samples taken from a closely controlled stratified sequence, radiocarbon dating often cannot improve upon the dating achieved through examination of the finds assemblage (Cunliffe 2005, 652-654). The dating of the finds recovered from the earliest phases of activity at Emersons Green, however, is imprecise. A modest programme of radiocarbon dating was undertaken to confirm and strengthen conclusions made on the basis of the pottery. The results were rather limited (Table 9.1), but in general they confirmed the understanding of the chronological development of the site. A number of dates which did not match precisely the expectations resulting from the finds analysis have been explained by the sub-optimal use of long-lived terrestrial plant macrofossils as sample material.

One of the challenges posed by the evidence from Lyde Green is pinning down precisely when sedentary occupation began. While present in some of the earliest features, ceramic sherds unfortunately do not help to put a precise date on the origins of the settlement. Many of the traditional forms and fabrics that were common in the Middle to Late Iron Age continued in production into the Early Roman period (Section 6.1 above). Compounding the problem is the lack imported or traded ceramics. The ability to date ceramics present in the archaeological features only improves with the introduction of small quantities of South Gaulish Samian ware during the Flavian period. The problem is compounded by an absence of early datable coinage. The earliest coin recovered dates to the 2nd century AD, and it is the only example predating the 3rd century AD. The first closely datable groups of pottery, referred to as Romano-British ceramic phase 1 (see below, Section 6.2), have been placed in the mid to late 1st century AD. These are most readily identifiable within Excavation Area D and derive from archaeological interventions excavated across the second phase of a D-shaped enclosure [1005] discussed below (Section 4). Samian forms produced in central and eastern Gaul constitute a more substantial supply in the 2nd century AD, along with regionally traded Black Burnished ware.

The radiocarbon dates returned for samples from pit [2120] and [1006] demonstrate activity in the landscape in the Middle-Late Bronze Age and Early Iron Age respectively. The identification of these discrete features indicates that the focus of settlement in the area during this time was not within the limits of Wardell Armstrong's excavations. More important for the dating of the inception of the settlement is the radiocarbon date of 344cal BC to AD 3 returned for a spelt (*Triticum aestivum ssp. spelta*) caryopsis (Appendix 2). The spelt was recovered from an environmental sample from the most southerly, east-west, boundary ditch in Area B (phase 1, cut by structure {4196}). The date confirms that the settlement may have begun during the Late Iron Age, although the problems of the calibration curve for this period do not allow a single date of this nature to add much precision to the matter.

While a significant quantity of possible 'Middle to Late Iron Age' pottery was recovered, the date of its production and use remains very uncertain. In the Bristol region it is generally acknowledged that the ceramic traditions of the Middle to Late Iron Age continued without significant variation in vessel form and fabric type right into the Romano-British period. At Lyde Green many of the deposits from which 'Middle to Late Iron Age' pottery was recovered also contained Romano-British material from the 2nd, 3rd and even 4th century AD. There are therefore two ways to

explain the origin of this material, neither of which are mutually exclusive.

Firstly, it may be that some of this ceramic material was produced in the Late Iron Age and is present residually, entering features which cut through earlier deposits. Where no earlier features were apparent, it may be that boundary ditches which originated in the Late Iron Age were recut regularly into the Romano-British period, the residual pottery being the only testament to their early origin. A second, more probable possibility, is that these seemingly mixed assemblages could in fact be representative of ceramic forms that were in contemporary production and use. That is, the new Romano-British ceramic forms came into use alongside existing so-called 'Middle to Late Iron Age' forms during the 1st and early 2nd centuries AD. While it is possible that both of these scenarios apply to the Lyde Green site, analysis of the stratigraphy and finds indicates that perhaps pottery produced in the Iron Age tradition is most likely to have been produced during the Romano-British period.

An argument in favour of the residuality of some of the so-called 'Middle to Late Iron Age' pottery is that it appears to have been concentrated in one particular part of the development area, within the fills of a set of enclosure ditches in Area C. It can be argued that had the use of these handmade forms still been common during the Roman period, one would expect them to have been ubiquitous throughout the Romano-British features in each of the excavation areas. As this was not the case, there is the possibility that the concentration of handmade wares in the local tradition indicates a Late Iron Age origin for the site. The enclosure in question, [2468], was a phase 4 feature. It saw a considerable amount of recutting activity in the Romano-British period, making it possible that some of the handmade pottery within it came from the fills of earlier truncated ditches.

A context group from the earliest phase in Area C, however, makes clear that this material was being deposited alongside, for example, a Samian ware sherd which had been refashioned into a spindle whorl. Additional evidence recovered during the trial trenching of Area D also demonstrates that some of the 'Middle to Late Iron Age' ceramic forms were being deposited as late as the 2nd century AD. A key assemblage comes from ditch fill in Trench 1, which was later identified as the southern portion of a D-shaped enclosure, about 75 m south-west of Excavation Area C (Bailey 2013, 15). As stated above, the fill of the later D-shaped enclosure ditch [1005] contained the first closely datable groups of ceramics, being infilled towards the end of the 1st century AD (see below, Section 6.2). The primary fill of a gully terminal [118] that cut this enclosure ditch contained the remains of eight vessels identified as 'Middle to Late Iron Age', as well as a handful of Romano-British sherds. These handmade vessels seem likely to have been deliberately deposited in this gully terminal rather than being derived from the fills of the earlier enclosure ditch, which it cut through (other archaeological interventions across the same feature did not record pottery of this nature).

There exists, therefore, the distinct possibility that much of the so-called Middle to Late Iron Age pottery was in fact produced and deposited during the 1st century AD, or even later. This casts doubt on whether the pottery recovered from archaeological features in Area C can safely be regarded as residual artefacts of the Middle to Late Iron Age. Further, it demonstrates significant problems with the dating of the locally produced ceramics. Such difficulties are clearly discussed in Rob Young's report on the handmade wares in Section 6.1 below. Let us examine the stratigraphic context of this category of ceramic ware in more detail.

4.1. Archaeological deposits containing 'Middle to Late Iron Age' pottery

Within Excavation Area C a series of intercutting pits and ditches was recorded representing eight distinct stratigraphic phases (Figure 2.9). On the basis of the finds from the fills of these pits and ditches, these phases seem to belong primarily to the Romano-British period. Area C phase 1 consisted of a single short ditch section [2289] aligned NNE to SSW and heavily truncated by later features. It had a single finds-free fill. Phase 2 comprised a ditch [2464] taking a reversed 'S' shaped course from a north-western terminus to a south-eastern meeting with the limit of excavation. Ditch [2464] contained pottery spanning the Romano-British period. Ditch [2464] was cut by east-west aligned phase 3 ditch [2466], which contained a small quantity of Romano-British pottery. Ditch [2466] was cut by phase 4 ditch [2468], which contained plentiful Romano-British pottery in its upper fills and formed the western boundary of a rectangular enclosure. While the southern boundary of this same enclosure, contained the remains of vessels produced in the Iron Age tradition, it also contained Romano-British pottery. On its northern edge this enclosure cut through earlier east-west ditches, which perhaps belonged to an earlier delimitation of the same space. In the fill of one of these earlier ditches a Samian sherd reworked as a spindle whorl was found (SF 52).

The largest number of traditionally 'Iron Age' vessels from any one feature, seven in total, came from three fills within phase 5 boundary ditch [2484]. This east-west aligned large boundary ditch, appears to have redefined the southern end of rectangular enclosure

[2468], perhaps integrating it into a wider enclosure system (Figure 2.9). Four further vessels, the second largest number from any one feature, came from Late Roman (phase 7) recut boundary ditch [2476]. This feature was curvilinear but ran north-south forming the redefinition of the north-eastern part of the rectangular enclosure. Both phase 5 boundary ditch [2484] and phase 7 recut boundary ditch [2476] cut phase 4 ditch [2050], which formed the southern boundary of rectangular enclosure [2468]. Ditch [2050] contained three 'Iron Age' vessels alongside pottery of a much later date, such as an indented/scale-decorated beaker of probable 3rd century date.

Of the remaining three 'Middle to Late Iron Age' vessels, one comes from curvilinear ditch [2017] and another from short ditch section [2324]. Both these features lie within the same rectangular enclosure delimited by the aforementioned linear features. Ditches [2017] and [2324] both also contained Romano-British pottery.

Consequently, like the material from within the rectangular enclosure ditches and their recuts, there is a distinct possibility that this 'Iron Age' pottery is residual or being produced in the Early Romano-British period.

Finally, ditch [2396], which delimited the northern edge of the rectangular enclosure, was 11.46m long by 0.62m wide and 0.45m deep. It had a V-shaped profile and a narrow, rounded base. It contained two fills, the lowermost was finds free, but the uppermost (2397) contained four sherds of an 'Iron Age' globular jar. Ditch [2396] appears to be a likely phase 1 feature within Area C and to have gone out of use by at least the Later Iron Age.

In summary, 14 of the 17 vessels produced in the Iron Age tradition from Area C are from contexts directly associated with the definition, or redefinition, of a rectangular enclosure. All the features yielding 'Iron Age' pottery contained datable Romano-British pottery in greater quantities. While it remains a possibility that the ceramics found in the later recuts were derived from the fills of earlier features cut on the same alignment, where the remnants of earlier fills survived they contained ceramic groups which could not be earlier than the late 1st c. AD. The Area C excavations, therefore, provide further evidence that the local traditions of handmade pottery, originating in the Middle to Late Iron Age, continued well into the Romano-British period.

Sherds of five vessels produced in the Middle/Late Iron Age tradition were also recovered from Area B, but only two of these were from features. The only artefact recovered from a six-metre-long linear feature was a sherd of 'Middle/Late Iron Age' pottery, but this ditch

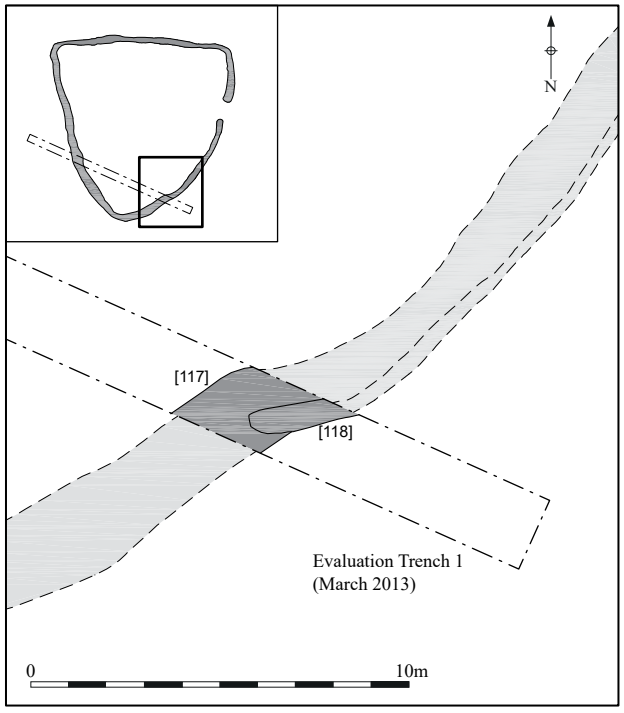


Figure 4.1 Plan of the D-shaped enclosure excavated in Area D, with Wardell Armstrong's 2013 Evaluation Trench 1 and gully terminus [118] also shown

cut through a Romano-British cremation within Area B, placing it in the late Romano-British period. Further sherds came from the fill of north-south aligned ditch cut [3715]. This was an Area B phase 1 feature located just west of structure {4213} and was cut by the foundations of Structure {4196}. This ditch was part of a rectilinear field or enclosure system, a group of the earliest features in Area B, possibly pre-dating the Early Romano-British period.

Most of the traditional 'Iron Age' pottery, therefore, came from Area C in features dated to the Early to Late Romano-British period (stratigraphic phases 4, 5 and 7). A straight-forward conclusion, that this pottery was made in the latter centuries BC and is residual, is not easily demonstrated. There is the possibility that later features, which were being filled in during the Romano-British period, truncated earlier ones that were originally cut and infilled during the Late Iron Age. The relative lack of abrasion to the handmade pot sherds, however, indicates that they were not moved around much following their initial deposition. The group recovered from gully terminal [118] in particular seems unlikely to have been residual and can be securely placed in Area B phase 3 (Period 4.2 Romano-British AD 125-300).

The fact that these ceramic forms may have continued in production into the early 2nd century AD, or even later, deprives us of reliable dating criteria for the origins of the farmstead and field system which preceded the Roman villa estate of the 3rd and 4th

centuries AD. Certainly we are dealing with a rural settlement which was in existence towards the end of the Late pre-Roman Iron Age. The earliest we can securely date the settlement, however, is to the mid-1st century AD. How much earlier this system of fields and settlement enclosures might have originated, whether mid-1st, 2nd or even 3rd century BC, is impossible to say. It seems safest to propose that we are dealing with rural settlement that was firmly established at the time of the Claudian conquest and which showed considerable levels of continuity into the 3rd and 4th centuries AD.

4.2. Excavation Area D: stratigraphic phases

Nine stratigraphic phases were identified in Area D, of which, three were identified as Late Iron Age/ Romano-British (Figure 4.2). This section focuses first and foremost on the first three archaeological phases identified within Excavation Area D, which probably all date to the 1st century AD. Subsequent sections move on to consider the evidence from the other excavation areas.

Area D comprised a large D-shaped enclosure demarcated by a ditch. The enclosure was located on top of a slightly elevated ridge towards the north-west of the excavation area (Figure 4.2). The enclosure had at least two phases, with the ditch of the later phase [1005] being larger than the earlier [1274]. Inside the enclosure the remains of postholes, pits and possibly gullies suggest that there had been structures within. Downslope from the ridge and to the south and east of the D-shaped enclosure were curvilinear boundary ditches. Most of the Romano-British pottery placed in ceramic phase 1 came from archaeological features excavated in Area D. Coins were absent from Area D, in marked contrast to Area B. It is also notable that, unlike areas A, B and C, areas D and E did not contain any ironworking slag. Area D, therefore, appears to be distinctive in terms of its chronology and the activities that were carried out there. The main period of activity seems to have been in the 1st and early 2nd centuries AD. This is a particularly interesting contrast with Area B, in which the stone villa and ancillary buildings were eventually built, becoming the clear focus of settlement activity in the Late Roman period.

Excavation Area D, phase 1

The earliest activity within Area D that may be attributed to the 1st century AD may have been associated with an enclosure formed by ditch [1274]. Enclosure [1274] lay in the north-west corner of Area D. The surviving length of the enclosure ditch was about 95m. It seems likely that it originally formed a D-shaped enclosure with a total area of approximately 0.15 ha. The enclosure had a wide north-eastern entrance, but its eastern side was truncated by the digging of later phase 3 enclosure [1005]. The ditch of enclosure [1274] was generally about 0.9m wide with a depth of 0.85m. The ditch profile was V-shaped on the enclosure's north and south sides but U-shaped on the west side (Figure 2.12, Section 2).

It is possible that this was an enclosure surrounding a farmstead. Pits and possible postholes in the centre of the space formed by enclosure [1274] may have related to occupation, with the postholes being the remains of structures. These remains were badly truncated by post depositional farming practices, however, and it is likely that any more ephemeral remains had been removed entirely.

A pit cluster was situated within enclosure [1274] on its western side (Figure 4.2). There was no stratigraphic relationship between the enclosure ditch and the remains inside it, but from their location, and from the finds assemblage recovered from these pits, it seems reasonable to associate the pit cluster and the enclosure ditch chronologically. Equally, however, elements of the pit cluster may have been associated with phase 3 activity and the later D-shaped enclosure [1005]. The pit cluster consisted of eight pits or postholes. All the pits were shallow between 0.05 and 0.15 m in depth, mostly circular or oval in plan and had gradual sloping sides, except for [1362] and [1423] that had steeper sloping sides. All had flat bases except for [1406] and [1400] that had rounded bases. The larger pits [1244], [1400], [1412] and [1410] were up to 1.2m in diameter. These larger pits contained one sherd of mid to late 1st century pottery and one sherd of late 1st to 2nd century pottery. The westernmost pits (perhaps more likely postholes) [1406], [1408], [1362] and [1423], were the most severely truncated and were smaller than the others, being about 0.3m in diameter. A total of 14 sherds of mid-1st to early 2nd century pottery was recovered from these features, along with 19 sherds of later Romano-British pottery. If the postholes do belong to phase 2, then it is possible that the earlier pottery entered the posthole at the time of creation, with the later pottery accumulating in the holes at the time of post removal. Alternatively, all the pottery entered the posthole at the time of dismantling a timber structure, indicating that the large pits had been filled and gone out of use before post removal.

The gullies from within enclosure [1274] all contained 2nd century or later pottery, with no 1st century finds. This suggests that the gullies, unlike the pits and postholes, were not associated with the use of enclosure [1274] and are later.

Stratigraphically unrelated to enclosure ditch [1274] and lying outside of the bounded space was a small



Figure 4.2 Plan of phases 1-3 within Excavation Area D, including the D-shaped enclosure ditch. © OpenStreetMap contributors

pit [1282] containing human remains indicative of a cremation burial (Cremation no. 11). This cremation pit lay to the north-west of enclosure ditch [1274], cut into the upper fill of ditch [1204]. A radiocarbon sample obtained from rose charcoal, part of the cremation deposit, returned a date of cal. 56 BC to AD 55 (Appendix 2). The vessel containing the cremation, however, was identified as 2nd to 3rd century AD southeast Dorset Black-burnished ware. The discrepancy between the radiocarbon date and the pottery can be explained by the fact that rose bushes can be long lived in the right circumstances. In this instance the rose wood may be 150 to 200 years older than the cremation.

Excavation Area D, phase 2

Enclosure ditch [1636] formed a U-shaped enclosure that was cut by phase 3 enclosure ditch [1005] (Figure 4.2). It may have also been cut by earlier enclosure ditch [1274] but such a relationship had been removed by ditch [1005]. Whether or not enclosure ditch [1274] was earlier or later than enclosure ditch [1636], it seems the enclosure formed by [1636] would have been incompatible as a functional feature when enclosure [1274] was operational. Enclosure ditch [1636] was generally around 0.4m wide by 0.3m deep with steep sloping sides and a flattish base. Pottery of 1st century AD date was recovered from the fill.

Other features which were cut by phase 3 enclosure ditch [1005] are likely to be associated with the same activity phase as ditch [1636]. Foremost amongst these was linear ditch [1129]. This ditch recut the northern side of the phase 1 enclosure ditch [1274] and followed the same rough east-west alignment for 27m. It was straight in plan, with steep, concave sloping sides and a rounded base, measuring 1.05m wide by 0.39m deep. Six sherds of mid to late 1st century pottery were recovered from its fills. Five metres to the north of ditch [1129] was another parallel ditch [1204]. Running east-west for 51.3m this ditch also had a U-shaped profile and measured 1m wide by 0.4m deep. The structural similarities between ditches [1129] and [1204] strongly suggest that they were contemporary and that they were used to define the space between them, probably for use as a trackway. It seems then that the northern edge of phase 1 enclosure ditch [1274] was redefined in phase 2 as the southern edge of a trackway.

Excavation Area D, phase 3

Morphologically, spatially and stratigraphically, the enclosure formed by ditch [1005] was clearly a replacement for the enclosure bounded by enclosure ditch [1274]. In this phase it was enlarged slightly to cover an area of approximately 0.18 ha, and was surrounded by a larger, more substantial ditch. Although a period of time elapsed, represented by phase 2, between the filling in of enclosure ditch [1274] and the creation of enclosure ditch [1005], the space defined by ditch [1274] may still have been defined within the landscape when ditch [1005] was created. This may perhaps have been an internal bank and hedge, which will be less archaeologically visible than a ditch.

As already stated, ditch [1005] contained the majority of the datable 1st century AD pottery recovered from Area D. The enclosure was roughly D-shaped, with three pronounced corners and an entrance way in its eastern side. The enclosure ditch had a total length of 160m. It defined an area of 0.18 ha, with the longest distance corner to corner being approximately 54m. The entrance consisted of a gap of 3.7m between the southern and northern terminals. The ditch had sharp, very steep sloping sides with a flat base and a V-shaped profile that became more U-shaped along the northern and north-western parts of the ditch. The enclosure ditch varied in width between 1m and 2.46m with a surviving depth of between 0.52m and 1.2m (Figure 2.12, S.2).

From the northern stretch of enclosure ditch [1005] the primary fill produced 42 sherds of mid-1st – early 2nd pottery. A total of 184 sherds of late 1st – early 2nd century pottery was recovered from the western side. On the east and south-east sides, 240 sherds of mid-1st to early 2nd century pottery were recovered. Later fills, which appeared to be dumps of material indicative of deliberate backfilling, included 1st to 2nd century pottery and some pottery of 2nd to 3rd century date. The later pottery suggests that enclosure ditch [1005] remained open and continued to be visible in the landscape into the 2nd century AD and perhaps beyond in places.

4.3. Additional evidence from Excavation Areas B and C

Other than the previously described Early Iron Age pit, Area A comprised linear cut features, probably marking the remnants of enclosure boundaries. These linear features appear to consist of three stratigraphic phases, the latest two of which were seemingly medieval and Post-medieval in date. The earliest phase, however, was broadly Romano-British, comprising curvilinear ditches [1038] and [1017] (Figure 2.4). Artefactual material recovered from within them spanned the 1st to 3rd centuries AD but included pottery of 1st century AD date from Romano-British ceramic phase 1. The assumption is that the curvilinear boundary ditches in Area A were excavated to define an enclosure, possibly in the earlier 1st century AD. These had gone out use by the end of 3rd century AD. Some evidence was found for the spatial continuation of these boundary features



Figure 4.3 Plan showing Late Iron Age and Early Romano-British field system and enclosures (Excavation areas A-D, Periods 2, 3.1, 3.2, 3.3 and 4.1).

to the south and west in Area B, in ditches [3063] to the south and [6130] to the west, though only one sherd of 2nd to 3rd century pottery was recovered from their fills (Figure 2.6). If the curvilinear ditches in Area A did form part of an enclosure with ditch [3063] in Area B, then they are associated with Area B phase 3 features and thus post-date the 1st century AD (see Chapter 5).

Within Area B there is clear evidence of a two-phased field and trackway system that pre-dated the 3rd century villa complex (Figure 4.3). Stratigraphic phase 1 comprises linear and curvilinear ditches and some pits. There is some correlation between these features and fills containing Romano-British ceramic phase 1 material.

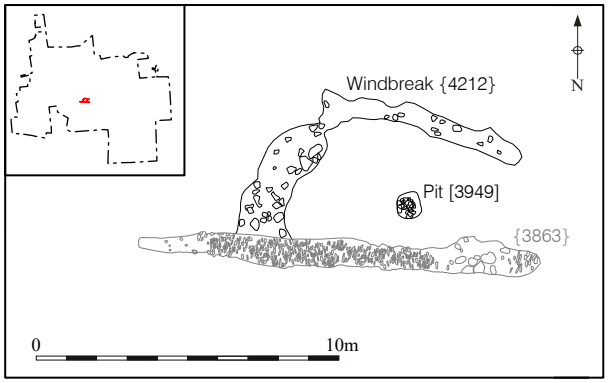


Figure 4.4 Plan of pit [3949] and wind break [4212], located within Excavation Area B

Pit [3949], within the southern central segment of Area B, was circular in plan, measuring 0.75m in diameter and 0.26m in depth (Plate 4.1). Thirty-eight sherds of late 1st to 2nd century pottery were recovered from the charcoal-flecked primary fill, along with fragments of a set of about eight triangular-shaped loom weights (SF 126). It is possible the weights had been reused as post-packing. There was a thin burnt clay layer lining the base and edges of the feature, however, and it was interpreted as a possible bowl furnace or hearth (Figure 4.3 and Figure 4.4). Surrounding the possible furnace on the west and north sides was a foundation trench [4212]. The foundation trench was 11.25m long, with a varying width of 1m to 1.3m by 0.1m – 0.18m deep and was cut into the bedrock. The fill of the foundation trench included limestone blocks and sandstone slabs and contained eight late 1st – 2nd century sherds of pottery. It is suggested that the foundations were for a low wall acting



Plate 4.1 Feature [3949] containing loomweights

as a wind break around the small pit [3949]. Certainly, the datable finds indicate that they are contemporary. To the east, and potentially protecting the furnace on that side, was another wall, indicated by foundation trench [4016]. Curvilinear and measuring 2.31m long by 1.42m wide by 0.06m deep, it had gradual sloping sides with an undulating base. The fill contained twenty-eight sherds of 2nd – 4th century pottery, though given the shallow survival of this feature these artefacts are perhaps more likely to relate to demolition and levelling rather than to construction. Either way, both these foundations had been levelled by the late 3rd century AD when wall {3863} of villa complex structure {4196} was built over them.

Area C contained similar evidence to Area B. There were eight stratigraphic phases of linear cut features within Area C, with most of these features relating to boundary ditches or drainage. Five of these eight phases appeared to be primarily Romano-British from the contents of their fills. In most instances the finds from the fills were very mixed and prevent the establishment of a sequence based on the artefact dating. The concordance between the stratigraphic phases and the finds dating is poor. For example, the phase 4 rectangular enclosure ditch forming the north-west sector of Area C, featured a concentration of possible Iron Age pottery sherds, but appears stratigraphically, and from the finds in its fills, to have gone out of use as a ditch in the 1st century AD. This ditch was recut on its southern side by Area C phase 5 enclosure ditch [2484], which appears also to have gone out of use before the end of the 1st century AD (Figure 2.9). Of course, pottery within ditch fills does not indicate the date at which a ditch feature was originally cut. The presence of recuts and the apparent mixture of finds, suggests that the ditches were at times scoured and cleaned. An in-situ primary fill within the northernmost enclosure ditch in the eastern half of Area C, and exposed in an Area C phase 7 recut, contained only 1st to early 2nd century pottery.

The conclusion is that within Area B in the 1st century AD there were two rectangular enclosures in part defined by large boundary ditches. The enclosure to the west was Late Iron Age in origin, but its boundaries continued to be maintained and defined into the Romano-British period. The enclosure adjoining it to the east appears to have been created in the 1st century AD (Figure 4.3). It seems likely that the enclosure system in Area C had largely been established by the mid to late 1st century AD, after which there were only minor modifications and subdivisions.

The overall conclusion is that the enclosure system evidenced in Areas A, B and C, was established in the 1st century AD, that it was based on an enclosure system that was probably first delineated slightly earlier in the Late Iron Age (it is impossible to be more precise about the date of the establishment of the settlement). It is likely that in the 1st century AD such a system was related to settlement outside these areas and probably in Area D (see below). Some industrial activity seems to have been undertaken in Area B during this period and the presence of 1st century AD loom weights in the fill of a hearth/furnace gives an indication of domestic activity.

4.4. The enclosures: context, duration, function and reasons for change

While a uniquely large area including the villa and its immediate surroundings was excavated, ultimately the excavation strategy investigated certain settlement hotspots with areas of ignorance in between. As a result, one does not have a complete understanding of the evolution of successive phases of field systems surrounding the villa and the preceding farmstead. It is highly likely that the two successive enclosures were associated with some of the Late Iron Age/Romano-British field boundaries recorded within Excavation Area D, and within areas A, B and C to the north. Definitive evidence within Area D is lacking, however, as there were no stratigraphic relationships between the boundaries. Any contemporary field boundaries are likely to have continued to be maintained and used later into the Romano-British period. On stratigraphic grounds, one of the earliest boundaries within Area D was towards the south-eastern limit of the excavation. This consisted of two ditches [1116] and [1493] with a gap between, presumably forming a field entrance. Together these ditches appeared to form the northern curvilinear boundary of a field extending to the south-east. The field may have originated in the 1st century AD, but the finds from within its fills suggest that the ditches remained open until at least the 4th century AD.

The replacement of enclosure ditch [1274] with enclosure ditch [1005] was a deliberate and planned act, the motivations for which need to be considered. The change in the size and definition of the enclosed space that this act precipitated took place within no more than a few decades at most of the enclosed space being originally defined. This implies that the enclosure was not simply an agricultural space. The seeming importance of the space, comparative morphologies with similar sites, the quantities of finds associated with surrounding ditches [1274] and [1005], and pits and postholes within the enclosure, all imply that this enclosure was used for domestic occupation. The evidence for convincing structures is lacking, but then more ephemeral features in Area D were undoubtedly negatively impacted by post-depositional ploughing. Surviving features displayed obvious evidence of truncation.

If, based on the pottery assemblage from within the enclosures, it is assumed that the first D-shaped enclosure came into existence at the end of the 1st century BC, or early in the 1st century AD, then the two enclosures may have functioned for between 100 and 150 years. The replacement of enclosure ditch [1274] with enclosure ditch [1005] saw an increase in the size of the enclosed area, an increase in the size of the ditch and a likely narrowing of the entrance. Whilst the earlier enclosure ditch defined the enclosure, probably with the assistance of a hedged inner bank, the later ditch had more of a defensive capability.

The enclosures could have been used for stock raising, as is very likely for the enclosure formed by ditch [1636] and this might be the case with enclosure [1274]. The sudden and brief appearance of a defensible enclosure, as represented by enclosure ditch [1005], however, is indicative of a space that was distinct and perhaps temporarily more important than the surrounding field enclosures.

4.5. Archaeobotany

By Don O'Meara and Lynne Gardiner

Only one archaeobotanical/zooarchaeological assemblage could be assigned with certainty to the Late Iron Age (Appendix 2. Table 9.1). This was sample <390> from deposit (3904) (Figure 2.7, Section 9). Most of the assemblage from which it was obtained comprised spelt glume bases (about 50). Ditch [3901], cut by the foundations of Structure {4196}, also contained Late Iron Age/Romano-British transitional pottery, so it seems likely that this primary ditch fill was formed during the late 1st century BC/early 1st century AD. The pottery is discussed in the following section. Other samples taken from putative Iron Age deposits produced either no remains, or small numbers of desiccated (possibly intrusive) common, wild plant seeds.

Area D enclosure ditch [1005] was dated via pottery typology to AD 80-100. Fills from this ditch - (1018) sample <4> and (1009) sample <7> - yielded several oat caryopses (*Avena* sp.), spelt glumes and indeterminate charred grains. No radiocarbon analysis was carried out on this material. Insufficient data was recoverable to say much that is meaningful about the Latest Iron Age/ Early Roman transition archaeobotanical assemblage, though it is notable that only during this period are oats an identifiable component of the Lyde Green archaeobotanical assemblage. Overall few conclusions as to land use can be drawn from the evidence of the archaeobotanical assemblage recovered from the 1st century AD activity within Area D. The evidence indicates more than one variety of grain, spelt wheat, being grown in the Lyde Green vicinity. It further suggests that this grain may have been processed within the D-shaped enclosure in Area D and that the waste materials found their way into the enclosure ditch. It is also notable that the assemblage dated to this period is comparable in terms of cereal type, and weed type (charred caryopsis of Broom grass, and smaller grass species), to the material from the assemblages dated to the later Roman period.

4.6. Discussion

There are very few features from the Lyde Green investigation zone that can be confidently dated earlier than the very Late Iron Age. The few features comprise a pit in Area A, radiocarbon dated to the Early Iron Age, possible Middle to Late Iron Age ditch terminal in the north of Area D, a single aceramic ditch in Area C and some possible Middle to Late Iron Age ditches from Area B, one of which produced a Late Iron Age radiocarbon date. The earliest datable small finds are brooches produced in the mid-1st century AD. This date corresponds well with the earliest datable context groups among the ceramic finds. The 188 pottery sherds, representing up to 30 vessels produced in the Iron Age tradition, do not provide secure demonstration of origins prior to the 1st millennium AD. The relatively large concentration of pottery from within the enclosure ditches of the rectangular enclosure in the north-west portion of Area C, or from inside the bounded space of that enclosure, suggests a concentration of activity in that area. It is possible that the rectangular enclosure in its earliest phases may be of Iron Age origin and it appears that the landscape was subdivided into field enclosures by the Middle or Late Iron Age. The very Late Iron Age and Romano-British field system appears then to have evolved from an earlier Iron Age field system. By the Middle/Late Iron Age it seems likely that spelt wheat was being grown in the vicinity. An occupation site must have lain close by, but there is no clear evidence of settlement within the excavated areas. It is possible that the loss of deposit over time has destroyed the remains of ephemeral settlement features such as postholes and round-house drip gullies.

From the pottery assemblage and the radiocarbon dated spelt wheat, it appears that sedentary settlement on the site dates from somewhere between the early 3rd century BC to the early 1st century AD. As one cannot be certain that any of the ceramic vessels were produced earlier than the early 1st century AD, placing the origins of the enclosure system as far as the 3rd or 2nd century BC would be bold. This is especially so, as most of 'Middle-Late Iron Age' pottery sherds appear alongside sherds of Romano-British date. There is enough evidence of truncation of aceramic features belonging to earlier phases to think that the origins of the settlement may have been somewhat earlier than the mid-1st century AD. It seems likely that by the mid to late 1st century BC the local landscape was being

exploited for farming and that a process of enclosure had begun. Until the Flavian period, connections appear to have been largely local, with no evidence of long distance or overseas trade.

The archaeological record for 1st century AD activity at Lyde Green represents a qualitative improvement over the material record from earlier times. It points to a focus of activity within Area D, especially to a pair of successive enclosures indicative of a mid-1st to early 2nd century period of activity. It has been argued that, despite a lack of clear or direct evidence for occupation and buildings within the enclosures, there is circumstantial evidence to indicate that these enclosures may be the origin and focus of domestic occupation on the site.

Moore has noted that the southern part of the Severn/Cotswold region exhibited a diversity of settlement form in the Late Iron Age and into the early Romano-British period, but open rather than enclosed sites were more common (2006b: 162). Curvilinear enclosures, including a subset of D-shaped enclosures are a rarity amongst enclosed settlements within the Severn/Cotswold region, especially in comparison to neighbouring regions in the Welsh Marches and the South-West (Moore 2006b: 52). Single ditched, D-shaped enclosures occur in the Gloucestershire Cotswolds, classified as non-hillfort settlements. There are examples at Bunnage and Down Ampney, the latter very similar in size to the Lyde Green enclosure, but also as putative hillforts, as at Kingsdown Camp in north Somerset. Moore speculates a stock corralling function for Bunnage, with perhaps only temporary occupation (2006b: 53-54). On circumstantial grounds this has been a view applied more widely for small and irregular, curvilinear enclosures dating to the Iron Age (Janik *et al.* 2011: 40). Whilst such an interpretation would concur with the lack of structural evidence at Lyde Green, and stratigraphically the D-shaped enclosure at Lyde Green did succeed a U-shaped, probable stock enclosure, such an explanation does not fit with either the quantity of finds from the enclosing ditch or the pitting within the enclosed space.

Morphologically and in size the later Lyde Green D-shaped enclosure is most like Kingsdown Camp, a small univallate hillfort in north Somerset (Figure 4.5). Their shapes are near identical and Lyde Green encloses about 0.18 ha and Kingsdown Camp 0.15 ha. Consequently, the physical similarities may imply similar functions. Kingsdown Camp was excavated in 1927-9, by Harold St. George Gray. The defences consisted of a dry-stone wall and V-shaped outer ditch of probable mid-1st century date, with an earlier inner ditch. It seems to have been a defensible settlement site. Nothing was found to suggest any occupation earlier than the Late Iron Age and occupation ceased by the mid-2nd century AD (St George-Gray 1930). The parallels between the Area D enclosure at Lyde Green and Kingsdown Camp

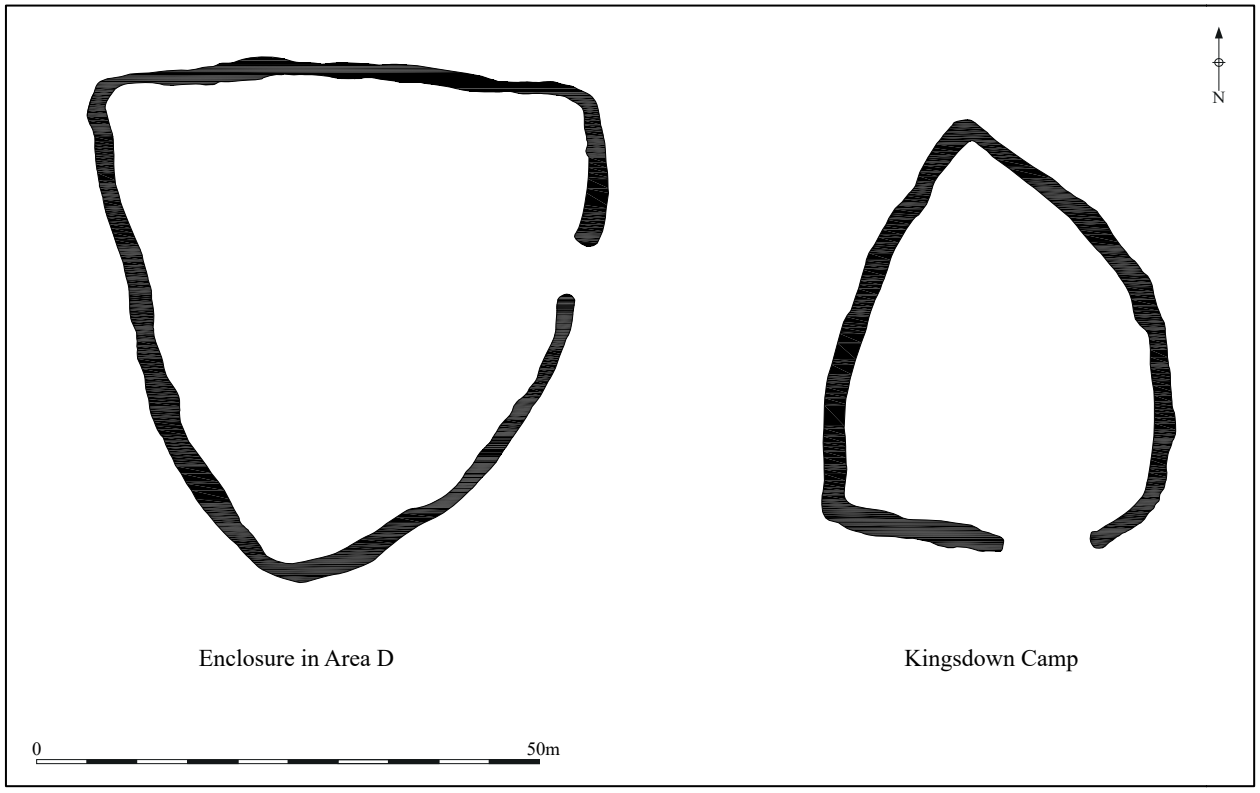


Figure 4.5 Comparison of the D-shaped enclosure within Excavation Area D with Kingsdown Camp

are remarkable. The conclusions extrapolated from the excavation evidence for Kingsdown Camp, as still reflected in the site's National Monument Record entry (NMR 203188; www.pastscape.org.uk), are embedded in the contemporary conceptual approach to the Late Iron Age and the Roman occupation. This sees a Late Iron Age site being reoccupied and refortified by the Roman administration. Such a conclusion is unlikely to be reached today. Rather, a native site may be interpreted as going through a mid-1st century refurbishment. A similar process seems to have taken place at Lyde Green.

The main difference between Kingsdown Camp and Lyde Green's D-shaped enclosure in Area D is that the former is interpreted as a hillfort and the latter is a lowland enclosed site. But, apart from elevation, is there really much difference between the sites? In relation to the Gloucestershire Cotswolds the point has been made previously that some hilltop enclosure sites resemble lowland ones, and it is location and the survival of earthworks that has led to distinctive site classifications (Janik *et al.* 2011: 41). Moore noted that D-shaped enclosures are often viewed as early Iron Age in date (2006b: 54). The evidence from both Lyde Green and Kingsdown Camp shows that some at least belong to the latest Iron Age and continued in use after the region came under Roman control.

The observation that the 'Iron Age' pottery from Lyde Green would fit comfortably into a date range of the 3rd to 1st century BC, as recorded for the pottery assemblage from the putative oppidum of Bagendon (Moore pers. comm. above), suggests that the population at Lyde Green shared the same material culture as the occupiers of Bagendon, 45km to the north. Bagendon is now considered to be a polyfocal settlement that developed from a series of Middle Iron Age banjo enclosures, becoming a centre of high-status occupation and presumed political power by the 1st century BC (Moore 2014). It is assumed to be a tribal centre of the Dobunni. Sites such as Bury Hill Camp and other Late Iron Age occupied hillforts local to Lyde Green, such as Kings Weston (Godman 1972: 47), may have been subsidiary sites to it and possibly local clan centres. Others have argued that there is little social distinction visible in the material culture of these Late Iron Age hillforts and non-hillfort settlements (Moore 2006a: 73). The material culture from Lyde Green is similar to many sites further north in the Severn/Cotswold region such as the Knolls, Bishops Cleeve and Churchdown Hill (Burgess *et al.* 2016; Marshall 1978; Parry 1999) and this could be taken to be an indicator of a shared Dobunnic tribal territory. Equally, the Lyde Green Iron Age artefact assemblage shares close similarities with sites to the south that are considered to be in Durotrigan territory, such as Stokeleigh (Haldane 1975). This could perhaps indicate similar sources of pottery production, irrespective of tribal affiliation.

To the south, in Durotrigian territory, there is evidence of continuity at Chew Park, Gatcombe and Marshfield, all sites that developed into early Roman villas (Moore 2006b: 165). More locally to Lyde Green and within Dobunnic territory, some hilltop enclosures show possible continuous settlement from the Middle/ Late Iron Age into the 1st century AD. Not far from Lyde Green at Stokeleigh (Haldane 1975), and perhaps at Lyde Green's neighbouring hillfort of Bury Hill too (Davies and Phillips 1927), wheel thrown native tradition pottery occurs, demonstrating use of the sites in the mid to late 1st century AD.

The successive D-shaped enclosures at Lyde Green, as defined by enclosure ditches [1274] and [1005], are unlikely to represent a refurbishment of a space which was used for the same function, as there is an intervening phase of activity when the first enclosure was, at least in part, modified. The first enclosure appears to have most likely been in existence by the early-mid 1st century AD and the subsequent phase 2 features are likely to have had an agricultural function linked to stock control.

The later D-shaped enclosure in Area D, on morphological grounds and from comparisons with other sites with similar morphologies, may have been used for occupation and had a more defensible character. Even though it seems likely that this later enclosure had a different function to the phase 1 enclosure, its location in the same vicinity was not coincidental. It is obvious that at least in part the phase 1 enclosure was a definable space in the landscape when the phase 3 enclosure was formed, even if the enclosure ditches had infilled. The pre-existing phase 1 enclosure in part influenced the later enclosure's shape and in places phase 1 enclosure ditches were recut. Why such a repurposed enclosure was constructed in the later 1st century AD is a question which cannot be definitively answered. If, as seems likely, it was an occupation site with a defensible surrounding bank and ditch, then increased security does seem a possible motivation.

Dobunni are generally thought likely to have been one of the tribes that surrendered to the Romans following the Claudian invasion, thus the Roman takeover of Dobunnic territory is thought to have been both peaceful and to have been accomplished by the mid-1st century AD. Nevertheless, by about AD 50 military installations had been established at Gloucester (first at Kingsholm) and Cirencester and these continued to be occupied until the late AD 70s (McWhirr 1981: 3-19). Whilst the fort at Cirencester, so close to the tribal centre at Bagendon, may have been intended to ensure dominance of the tribal political elite, those at Gloucester may have been more forward operational bases for military activities targeted against the Silures in present day south Wales. Hostility with the Silures

lasted for about 25 years until the eventual subsuming of their territory into the empire in the 70s. Consequently, for the native inhabitants of the South Gloucestershire area it may have seemed during the AD 50s to 70s that they were living in an insecure frontier zone. This may well be the context for the development of the phase 3, D-shaped, enclosure in Area D and certainly the pottery within its ditch fills is not inconsistent with placing this enclosure as being used during the AD 60s and 70s (Section 6.2).

The interpretation of the D-shaped enclosure as a defensible occupation site, following in a continuum of native Iron Age type settlements in the Lyde Green area, requires a local explanation specific to the circumstances, that is likely to have existed at the time of its construction. An adaptive native response to a perceived lack of local security seems to be a reasonable explanation. It should not be considered that this was a defensive site enabling an armed response to a perceived threat, as such an establishment would not have been tolerated by the Romans in the mid to later 1st century AD. Rather this was a defensible space, enabling people and stock to be secure within a ditched and embanked enclosure, presumably with a palisade atop the bank and a securable entrance. As such this highly visible feature in the landscape may have been as much about expressing status as realistically guaranteeing security.

Chapter 5

The Romano-British period and the villa estate

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with contributions by
Don O'Meara and Lynne Gardiner

This chapter outlines the evidence for the Romano-British occupation recorded during the excavations at Lyde Green. The first section gives a brief summary of the archaeology found within each of the excavation areas. Sections which attempt to set the villa within the context of its immediate surroundings then follow. The evidence for the field system and set of enclosures that surrounded the site prior to the construction of the villa comes first, followed by a discussion of the evidence for pre-villa structures and activities. The tripartite corridor villa that was built in the mid-late 3rd century is then introduced. A detailed examination of the estate's various ancillary buildings comes next, followed by a description of the burial evidence and human remains. Although the archaeo-environmental and animal bone data recovered from Lyde Green add little to our understanding of the economic organisation of such sites, brief sections on them are included. The chapter then concludes with a general discussion.

5.1. Romano British occupation and land-use from the early 2nd century AD to the mid-3rd century AD

Evidence for Romano-British activity dating from the early 2nd century through to the mid/late 3rd century was found in excavation areas A, B, C, D, E and F. In Areas A and B, as previously stated, a large enclosure can be postulated. This may have come into existence in the 1st century AD, but the surrounding ditch appears to have still been operational as late as the 3rd century. This enclosure was towards the top of the ridge that was examined archaeologically within Area B. It defined a largely open area with few subdivisions. The enclosure seems to have formed part of a field, and perhaps trackway, system postulated as having been laid out in the 1st century but then modified in the 2nd to early 3rd centuries AD, as indicated by the stratigraphic phase 2 and 3 linear features from Area B (Figure 4.3). In Area B phases 2 and 3 equate with 2nd and 3rd century activity.

In Area C a large rectangular enclosure is considered likely to have been in existence by the late 1st century or early 2nd century AD. A similar enclosure developed just to the east. These enclosures do not appear to have been simply fields during the 2nd to 3rd centuries AD but housed some processing activities. This suggests that these two enclosures were close to the focus of habitation during this period. Evidence of further land division extended southwards.

In Area D phase 4 and phase 5 features related to 2nd-3rd century activity. These were ditches, gullies, pits and postholes and, above all, the masonry foundations of a building which may be indicative of a focus of settlement within the later villa estate during the 2nd to late 3rd centuries. Area E contained undated features, but a rectilinear set of boundaries are considered most probably to be of 2nd to 3rd century AD date. This is based on comparison with similar patterns of boundaries in Areas B, C and D. The lack of finds from Area E probably indicates that it lay some distance from settlement activity that was contemporary with its boundary ditches.

5.2. The enclosure system

Enclosure boundaries dating to the Romano-British period were identified in areas A, B, C, D and E. In Area A the evidence of Romano-British boundaries has been interpreted as forming part of a large, possibly rectangular enclosure established in the 1st century AD and extending southward into Area B. In Area B boundaries dating to the 2nd to later 3rd century AD formed part of the phase 3 activity noted within the area.

If the curvilinear ditches in Area A did form part of an enclosure with ditch [3063] in Area B, then they are associated with Area B phase 3 features and thus post-date the 1st century AD. Whilst there were stratigraphic relationships between the ditches indicating two phases of activity, including the recutting of ditches from earlier phases that had filled in, the dating evidence for these ditches was insufficiently precise to be sure of the dating of this sequence. The evolution of the enclosure pattern is also uncertain, because some of the phase 2 ditches may simply have been well maintained and regularly scoured out. These will have then been filled in later than others which were in fact contemporary in

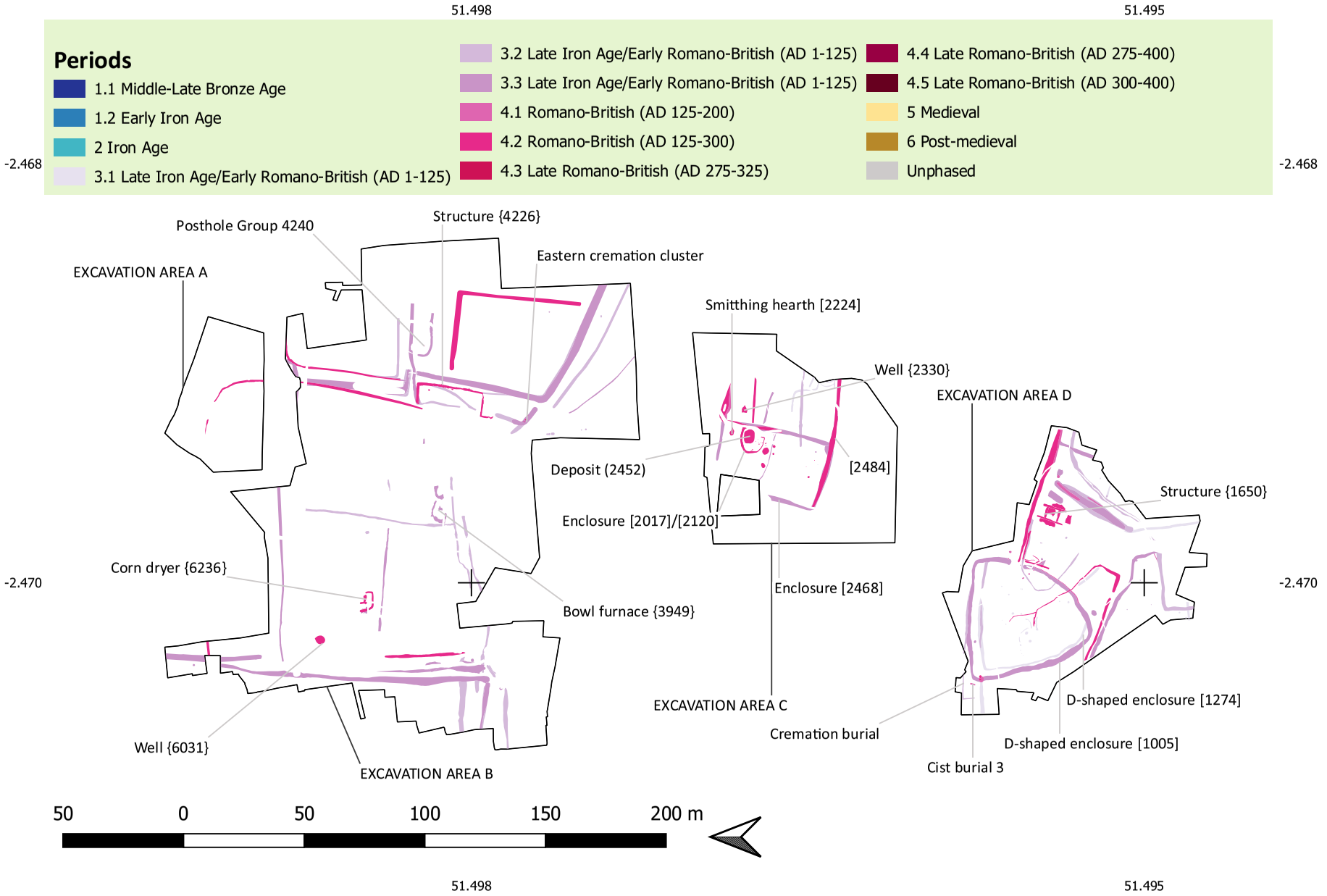


Figure 5.1 Plan showing pre-villa features in excavation areas A-D

their date of initial creation. Clearly, however, the finds evidence indicates that the enclosure system came into being in the 1st century AD, with some boundaries possibly being earlier in origin. The system continued in use with some modifications up to the later 3rd century AD. By then, as well as the large enclosure in the centre of the area, there were additional rectilinear enclosures.

Although there was no obvious continuation of boundaries from Area B into Area C, the large rectangular enclosures within the latter area would appear to have functioned contemporaneously.

In Area D, by phases 4 to 5, D-shaped enclosure ditch [1005] had been in-filled, though it was partially recut on the southeast side. Otherwise the lack of later Roman linear features cut across the filled-in former enclosure ditch suggests that the putative enclosure bank, or other form of boundary marker like a hedge, was still extant and forming part of the enclosure pattern. Two new ditches and two gullies were added to the existing enclosure system in Area D phase 5, both to the south-east of the D-shaped enclosure and appearing to define a space within which a building was constructed (Section 5.3).

All the enclosures added in the 2nd to 3rd centuries AD in Areas B and D appear to be characterised by their rectilinear nature in comparison to the earlier boundaries that were a mixture of rectilinear and curvilinear shapes. In Area E a further pattern of rectilinear boundaries is evidenced by ditches [2075], [2085], [2165], [2019] and [2177]. These features appear to be indicative of a Romano-British field system with a possible drove way between the fields (Figure 2.13). Some of the fills of these boundary ditches contained ceramics of the 1st century AD.

5.3. Pre-villa structures and evidence of occupation

Throughout Excavation Area B there was evidence of on-site occupation dating to the mid-2nd to mid-3rd centuries. Whilst there was no definitive evidence of habitation dating to this period within Area B, there was evidence of activity within the enclosures. This consisted of a well, a corn drier, a building of undefined function and human cremation burials (Figure 5.1). These elements at least indicate that the enclosures noted within Area B were not simply agricultural fields during the 2nd to 3rd centuries. The precise nature of the activity undertaken here during the 2nd to mid-3rd century is difficult to define. This is in part because of the impact of later developments on the relevant remains, notably the restructuring of the area when the stone villa complex was built in the later 3rd century. In general, however, during the 2nd to 3rd centuries Area B seems to have been used primarily for processing and production activities.

Excavation Area B, pre-villa activities

Well {6031} was in the north-west corner of Area B. The well had an exterior diameter of 1.3m and an internal diameter of 0.8m, which narrowed to 0.65m at 1.2m deep. The well was excavated to a depth of 2.4m but was not bottomed. The well was drystone-lined and its cylindrical internal lining consisted of randomly coursed sandstone slabs. A construction deposit associated with the well consisted of fractured mudstone pieces and thirty sherds of 2nd century pottery. The fill within the well comprised a mix of large sandstone blocks, silty clay and fifteen sherds of late 3rd – 4th century Roman pottery. It appears likely that this material was deliberately backfilled into the well following the abandonment of the phase 4 villa complex (Plate 5.1).

To the south-east of well {6031} a T-shaped kiln was recorded {6236} (Figure 5.2), which was truncated by the north-east corner of the main villa building. Such features are commonly found on Late Romano-British sites near to occupation areas and comprise a stone-lined chamber sunk into the ground, of which the stem forms a flue accessing a transverse chamber which once supported a drying floor (Allen *et al.* 2017: 55-58). The flue channel was cut into the natural bedrock and both sides were lined with un-worked blocks of pennant sandstone in four surviving random courses. A single remaining stone course survived of the revetment of the base of the drying chamber, at its west end. The kiln measured 2m east-west by 1.6m north-south and survived to a height of 0.28m high. Within the flue there were two fills. The primary fill probably formed during use of the drier and had evidence of heating in the form of baked clay. Two sherds of undiagnostic pottery described as '2nd – 4th century' were recovered from within it. No archaeobotanical samples were recovered from either the flue or the base of the drying chamber, so there is no evidence to indicate the nature of the material dried, nor the character of the fuel used. Usually, such kilns are interpreted as having been used for corn drying, though equally they could have been used for malting, an interpretation more likely where germinated grain is present within archaeobotanical samples (Allen *et al.* 2017: 62-63). Without such evidence, however, any conclusion must be based on comparisons with similar, better evidenced structures from other sites. In this case some form of grain parching seems the most likely function for the kiln.

A curvilinear foundation trench [4193] surrounded the grain drier on the west, south and east sides. It was 13m in length by 0.65m – 0.8m in width but survived only to a



Plate 5.1 Well {6031}, looking east

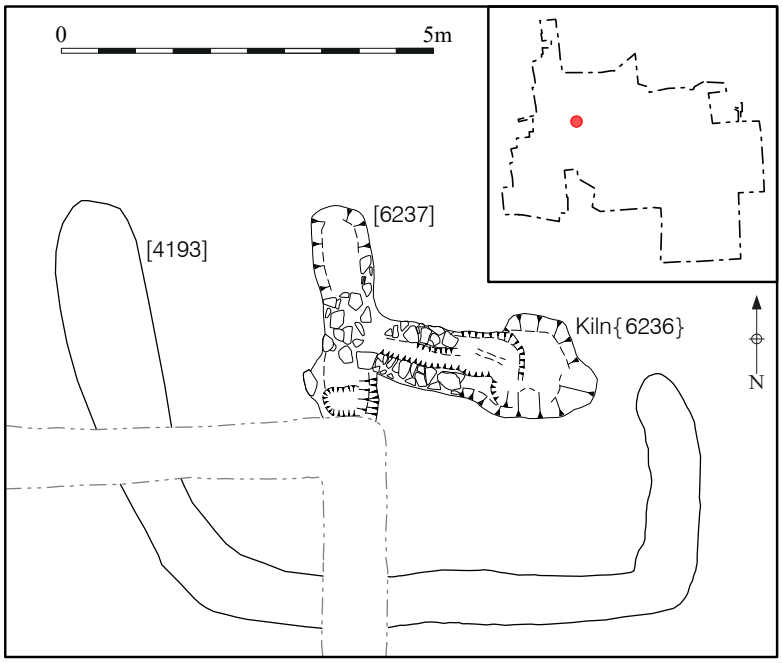


Figure 5.2 T-shaped corn-drying oven {6236} with foundation trench (4193) located in Excavation Area B

depth of 0.1m – 0.19m. Its eastern terminus was directly east of the stoke-hole for the grain drier, possibly no coincidence and perhaps linked to the control of air flow. Along the southern, inner edge of the foundation trench there was a single course of squared, roughly dressed red sandstone slabs. These were tightly packed with no bonding material. The foundation trench appears to belong to the same phase as the grain drier, in that it pre-dated the later main villa building and there seems to be some physical association between it and the grain drier. Consequently, it is considered that the foundation trench represents a stone wall which acted as a wind break for the grain drier. This wall is likely to have been demolished and levelled at the same time as the grain drier.

Stratigraphically the kiln and the wind break had clearly gone out of use and been demolished and levelled before the construction of the Area B phase 4 main villa building. Indeed, the removal of the kiln was presumably part of the site preparation works for the erection of the main villa building. A group of four postholes [4240], all sealed beneath a levelling layer (3111) within structure {4219}, may have also predated the construction of the villa and may have been contemporary with the grain drier (Figure 5.1). The postholes were up to 0.4m in diameter by 0.16m deep. Their function was not discernible.

At the same time as the corn dryer was in use, the phase 2 bowl furnace and wind break (discussed in Section 4.3 above) may still have been in use, though the 1st century AD loom weights found in the furnace fill indicate that its use had ceased before Area B phase 3 activity began. The possibility that iron smelting was carried on in Area B phase 3 must be considered. Three hearth bottoms were recovered from a large pit [6187] in the northern extremity of Area B. Unfortunately, it was not possible to place this pit within a stratigraphic phase, and it contained no datable finds. Tap slag was found throughout Area B, though largely in phase 4. There exists the possibility that some of the slag could have been residual. The lack of slag from phase 3 features, however, does suggest the possibility that smelting was not being undertaken in Area B during that phase. Either way, it can be suggested that functionally the central and western portions of Area B were in the Romano-British period, prior to the later 3rd century, a working area for processing raw materials.

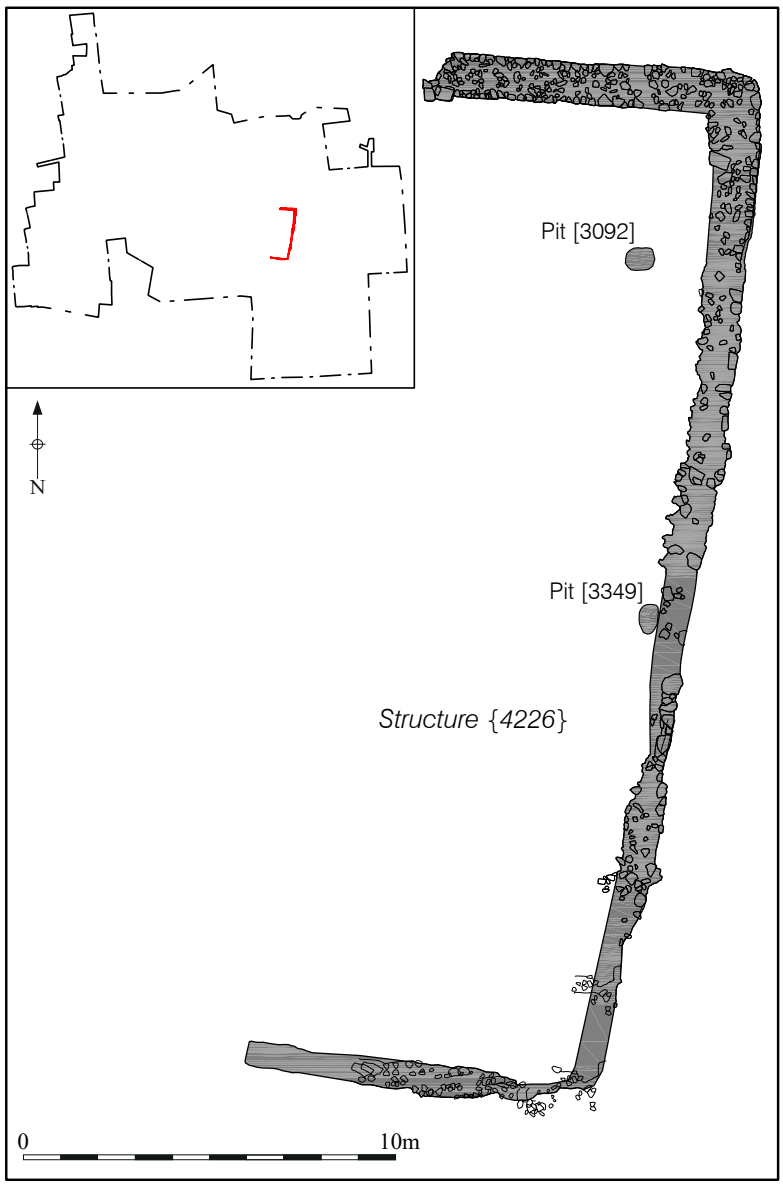


Figure 5.3 Structure {4226} within Excavation Area B

Excavation Area B, Structure {4226}

The explanation for the location of the eastern cremation cluster may relate to the remains of a building found a few metres to the north. Structure {4226} was located near the base of the north-south ridge which crested on the west side of Area B (Figure 5.3). The structure was rectangular, aligned north to south and measured 28.87m long by 7m wide. It had clear foundation trenches on its north, east and south sides. Stratigraphically it post-dated underlying phase 1 and 2 ditches (Plate 5.2). Thus, the building could belong to either phase 3 or 4. It was misaligned in relation to the rectilinear arrangement of the buildings demonstrably contemporary with the phase 4 main villa building. The building techniques used were closer to those exhibited in the 2nd-3rd century building erected in Area D than to the 3rd-4th century villa complex in Area B. One of the demolished walls of structure {4226} was overlain by a layer containing 176 sherds of Romano British pottery of exclusively 2nd century date. In the north-west corner of the structure, which was built on top of phases 1 and 2 ditch fills, a rebuild had been necessary due to subsidence. A consolidation layer had been laid on top of the ditch fills before the foundations were laid. This contained 110 pottery sherds all 2nd century in date, along with a copper alloy nail (SF 61) dated to the 1st – 2nd century. The evidence conclusively indicates that structure {4226} was built in the 2nd century probably with a functional lifespan well into the 3rd century. It has thus been placed in phase 3, indicating that it was contemporary with grain drying kiln {6236} and the cremation burials.

The foundation trenches of structure {4226} varied between 1.28 and 1.7m wide and were only 0.2 to 0.35m deep. Their shallow nature may account for why there was no evidence of a western flanking wall. The foundations comprised either a clay layer or, in places, upright sandstone slabs. On top of the foundations flat sandstone slabs were laid. Only one course of slabs survived, and it is not clear whether there were



Plate 5.2 Ditch [4160] & layers (3141) and (4149), showing foundations {3123} of structure {4226}, looking southeast

further courses. The presence of demolition layers abutting parts of the wall and a demolition deposit derived from the building forming a putative trackway or consolidation layer [4135], suggests that there was originally more than a single course. Whether stone footings or a dwarf wall, it is highly likely that structure {4226} would have primarily had a timber superstructure. Postholes or post pads would not have been necessary for a timber structure erected into a wall plate, built on either stone footings or a dwarf wall. Similar construction techniques were inferred for part of the 1st to 2nd century villa at Wortley in South Gloucestershire (Wilson *et al.* 2014: 4-5) and it is a building technique that was probably more frequently used than is often acknowledged (Perring 2002: 91). The lack of stone tiles found in association with the building suggest that its roof was probably thatched.

It is difficult to infer the function of structure {4226}, as its preservation was poor. It does appear to be contemporary with the grain dryer located *c.* 80m farther west and the cremations 10m or so to the south. If these features had been found in an excavation area elsewhere, without any data from the surrounding environs it is likely that it may have been considered a domestic building and that together the group of features would be interpreted as representing a farmstead. At Lyde Green, because the wider environs were examined, the temptation to leap to such a conclusion has been resisted, though it may still be valid.

Smithing in Area C

Area C during the 2nd-3rd centuries AD experienced an increase in activity and seems to have been used primarily for smithing in its northern portion. Elsewhere the field system presumably continued to support agricultural activities. No evidence for domestic occupation during the 2nd-3rd centuries was found within the area.

The industrial activities recorded are likely to have been associated with the similar activities noted in Area B. A possible smithing hearth [2224] belonging to Area C phase 6 was placed in the northeast corner of enclosure [2468] (Figure 2.9 & 5.4). Although probably first delimited in the Late Iron Age (Section 4.1), this enclosure appears to have had its boundaries recut continuously, continuing in use into the 3rd century

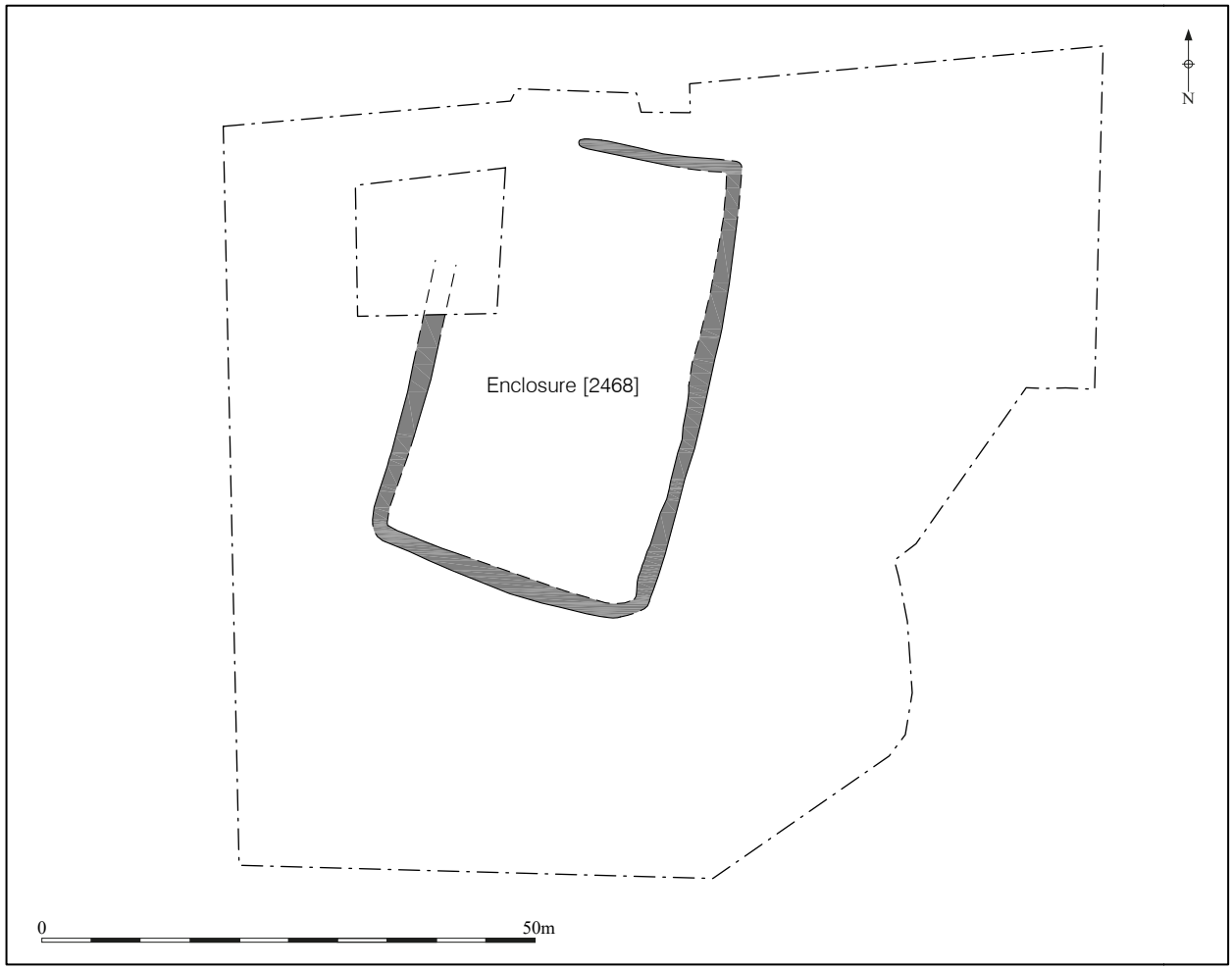


Figure 5.4 Excavation Area C, phase 4 rectangular enclosure ditch [2468]

AD. The upper fill of ditch [2468] contained frequent charcoal flecks and a total of 275 pottery sherds. Of these, 219 were exclusively 3rd century in date and none of the pottery from this feature necessarily post-dated the 3rd century AD. Six iron objects, two iron nails and seven pieces of clinker were also recovered.

The smithing hearth in the corner of the enclosure was keyhole shaped, with a rounded end for the fire pit at the west end and an east-west aligned channel forming a stoke hole and possible bellows hole to the east. The kiln measured 4.64m by 1.48m wide with a depth of 0.15 – 0.34m. A thin layer of loose, light grey ashy silt covered the lower edges of the cut and appeared to relate to the initial use of the kiln as it was overlain by stonework, which lined the base and sides of the kiln. Overlying the stonework was the main fill, which was associated with the abandonment and decommissioning of the kiln. This deposit contained 53 sherds of mid to late 3rd century pottery, along with a single piece of slag. The smithing hearth thus appears to have predated developments that were contemporary with the later 3rd to 4th century villa. It seems likely that the use life of this feature was contemporary with the productive activities taking place during Area B's phase 3 and Area D's phase 5.

The precise function of the structure was unclear from its construction or contents. The only industrial waste from within it was iron slag, but it was not a bloomery forge. The most plausible interpretation is that of a smithing hearth. Supporting this interpretation is the fact that six to ten metres to the east were four cut features, the fills of which were found to include substantial quantities of smithing slag, as well as fragments of a hearth bottom. These were: the fills of Area C phase 7 enclosure ditch [2476], recut to the immediate east of the putative hearth, the fills of the phase 5 well [2330] to the south-east, and the fill of pit [2130].

Seemingly contemporary with the probable smithing hearth was a sub-circular enclosure to its immediate south. This enclosure, numbered [2017]/[2120], was also located toward the northeast corner of pre-existing rectangular enclosure [2468] (Figure 2.9). It was defined by a C-shaped ditch to the north, and west, but in the south by a narrow gully only (Plate 5.3). In



Plate 5.3 Enclosure [2017]/[2120], looking east

the east it appeared to be defined by a recut section of enclosure ditch [2468]. The ditch measured 24.6m in length, enclosing an area of 63.75m^2. It ranged from 0.18m to 0.84m wide and was 0.05m to 0.25m in depth. The lowermost fill contained moderate charcoal flecks and four sherds of 2nd – 4th century pottery. Stone rubble had been packed into the natural clay, possibly being indicative of part of the ditch having functioned as a foundation trench. The narrow gully and four post-holes at the southern side of enclosure [2017] are possibly suggestive of a small lean-to shelter, but most of the enclosure would appear to have been open to the elements. A spread of material (2452) in the north side of the enclosure may have been a levelling layer for a floor surface associated with the enclosure. It had an early Romano-British wine flagon, SF 9 deliberately buried within it, perhaps as a foundation deposit intended to honour the deity linked to whatever processes were carried out within the enclosure.

Altogether the evidence is suggestive of a small enclosure probably associated with the putative hearth to its north. Charcoal and clinker are suggestive of heating and the iron objects and nails found may be the remnant products of the manufacturing processes carried out within the enclosure. The work undertaken within the enclosure perhaps involved the finishing of objects initially forged in the smithing hearth. It seems then that within Area B iron smithing was carried out probably from the 2nd century until the later 3rd century when the operations appear to have ended and the site was 'tidied up' with the open enclosure ditch being deliberately infilled.

Well {2330} appears to have provided water for the 2nd to 3rd century smithing activity in Area C and was situated just 8m to the east of the likely smithing hearth (Figure 5.5). The well was cut through natural clay for the first 1.7m and then through the bedrock for the next 3.2m. Its full depth could not be explored because of safety constraints. The cut was widest at the top, where it was cut through clay, and measured 2m by 1.35m with steep sloping sides (Plate 5.4). Once it reached the bedrock, the cut narrowed to 0.9m in diameter and the sides were vertically cut. The well was lined with roughly hewn, medium to large sized sandstone blocks that were randomly coursed. It consisted of at least 60 courses, the lower of which were of drystone construction. The upper courses, by contrast, were bedded with clay. The lowest fill excavated contained five sherds of mid-3rd to 4th century pottery. The well appeared to have been abandoned but not demolished and allowed to naturally silt up.

Excavation Area D, Structure {1650}

Following the abandonment of the D-shaped enclosure in Area D sometime in the 2nd century AD (Section

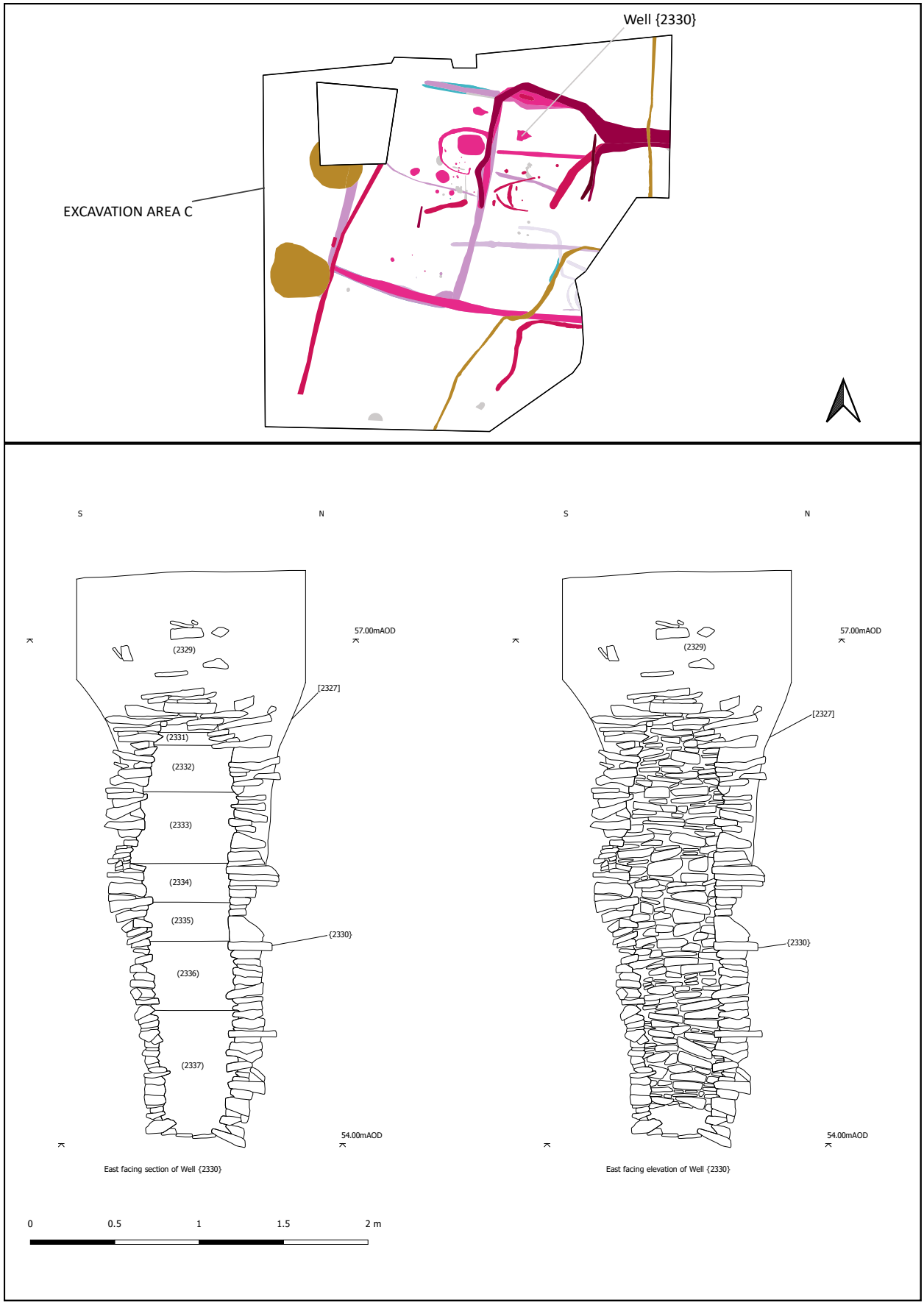


Figure 5.5 Plan and section of well {2330} within Excavation Area C



Plate 5.4 Well {2330}, looking west

4.2), rectilinear enclosures subdivided the area to the south-east with a large west-north-west to east-south-east aligned boundary ditch [1045] appearing to respect the enclosure and its eastern facing entrance. This relationship indicates that the D-shaped enclosure remained a feature in the landscape, even if its ditches had filled in, and continued to have a function. Boundary ditch [1045] helped to define a space to its south into which a building was inserted. Structure {1650} was aligned north-east to south-west and sat at the base of the low ridge to the north and west. It is upon this ridge that the Lyde Green villa was constructed, and many centuries later still, Hallen Farm.

Structure {1650} appeared to be a three-celled, rectangular building, approximately 14m long by 5.5m wide (Figure 5.6) with an internal floor space 4.9m in width. The building's preservation was poor, especially at the gable ends. Its flanking walls consisted of foundation trenches about 0.50 to 0.60m wide and between 0.40 and 0.78m deep. Within the trenches the wall foundations were formed of hardcore comprising packed smaller rubble, with some large sandstone

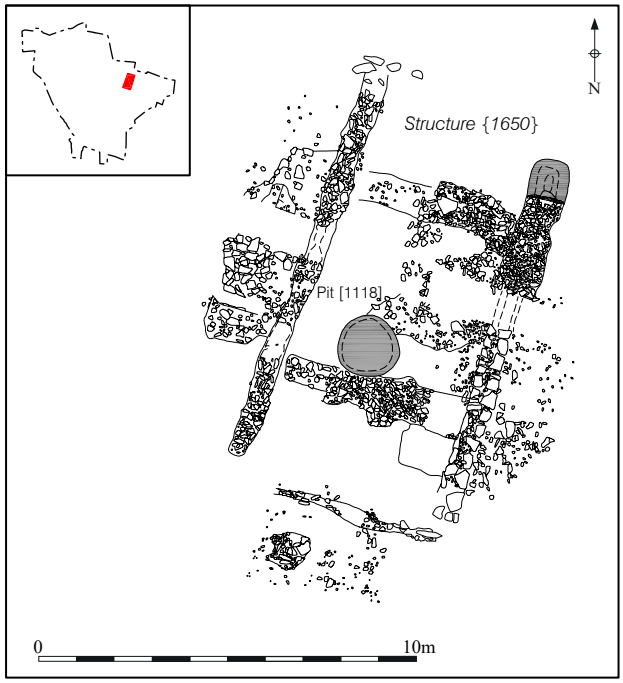


Figure 5.6 Three-celled rectangular building {1650} within Excavation Area D

slabs near the base. Where the evidence survived, the foundations were topped by roughly hewn sandstone slabs, laid flat on top of the foundations. The north-eastern gable end foundation comprised a 0.65m wide by 0.78m deep foundation trench. Little of the south-western gable end survived. The foundations consisted of roughly hewn sandstone blocks that were tightly packed and pitched at a slight angle in a herringbone pattern over two courses. The two partition walls forming the central cell comprised foundation trenches over 1m wide and about 0.35m deep. The foundation matrices were similar to those of the foundations of the building's flanking walls.

Structure {1650} had some unusual features. The construction of the foundations at the northern gable end was different to those for the other walls. This may be indicative of it having been rebuilt. This is especially so, because the construction technique used is the same as that used for the phase 4 villa complex in Area B, a phase that post-dates structure {1650}. The internal partitions had more substantial foundations than the external walls, which suggests that they may have had a load-bearing function. It is possible that the central cell housed a staircase and that this part of the structure was thus stone built. The relative narrowness of the external walls and the slab-like single course of walling on top of the foundations may be indicative of the external walls having been half-timbered into a wall plate sat on a dwarf wall footing.

The interpretation of the fragmentary building foundations is that structure {1650} was a two-storey half-timbered building, multi-roomed with three cells on the ground floor. No roof tiles were found in the overlying demolition debris, so it seems likely that the building would have been thatched. No evidence of flooring was found, but that may be because it was removed when the building was abandoned. There was also no evidence of painted wall plaster or hypocausts indicative of underfloor heating. Overall, the evidence suggests an unpretentious utilitarian building. The building's function was not clearly discernible. Given its location, its multi-cellular character and its date of 2nd to 3rd century, it is reasonable to interpret the structure as a house. It is, therefore, very tempting to suggest that it was the successor to any farm dwelling that may have existed within the D-shaped enclosure, and the predecessor of the tripartite villa that was eventually built at the end of the 3rd century some 250m to the north.

Cremation burial no. 11, found in Area D and containing human remains within an urn of 2nd-3rd century (see Section 4.2), probably relates to the occupation of structure {1650}. The cremation pit [1282] lay 76m west of structure {1650} and about 200m south of the other two cremation clusters excavated in Area B. It was cut into the upper fill of ditch [1204], considered to be part of a 1st-2nd century boundary feature (Figure 2.12, Section 5). The pit was sub-oval shape in plan, measuring 0.43m by 0.35m by 0.12m. It had sharp, steep sloping sides, except for the west side which was gradual sloping, and it had a rounded base. The urn was dated to the 3rd century, contemporary with the occupation of structure {1650}. The urn, a south-east Dorset Black Burnished ware pottery vessel, contained the remains of an adult (20-35 years) and a juvenile. The juvenile was less than twelve years of age. It can be assumed that the cremated individuals were the occupants of the farmstead that structure {1650} appears to represent. The proximity of a later cist burial to the cremation may indicate the existence of a formal burial zone (Section 5.7).

5.4. The villa complex and its development

The villa complex was built within, and partially over, an earlier field system. The main complex of buildings was built within a pre-existing putative rectangular enclosure, which was positioned on top of the ridge within Area B. This enclosure appears to have been constructed in the 1st to early 2nd century AD and to have defined a space within which industrial and processing activities had taken place from the 1st to 3rd centuries. The eastern cluster of cremation burials dating to the 2nd-3rd centuries was located towards the south-east corner of this enclosure. The complex did not, for the most part, extend over the major pre-existing boundaries established in the 1st to 2nd centuries. Indeed, in some cases its layout reused and adopted the pre-existing boundary arrangements. It seems that the villa complex was built within the largest, relatively open space within its plot. Nevertheless, the remnants of pre-villa activities, such as the grain drying kiln {6236} and structure {4226}, were clearly levelled before the construction of the villa buildings.

Despite this fact, establishing a precise *terminus post quem* for the construction of the main villa building has not been possible. The fill of the field system ditch, which its foundations cut through, contained late 1st and 2nd century pottery. The fill of corn dryer {6236}, also cut by the foundation trenches, contained undiagnostic pottery described as '2nd to 4th century' in date. While a coin was recovered from the upper part of a levelling deposit (SF 299), also cut by the foundation trenches, it dates to the AD 340s and it is highly likely to be intrusive. Another coin dating to AD 335-340 (SF 300) was recovered from the fill of a posthole within the main villa building, but it is likely that the coin entered the post-hole when the post was removed. The foundation trenches were heavily robbed and backfilled with late 3rd to 4th century pottery, the same date given to material found within the spreads

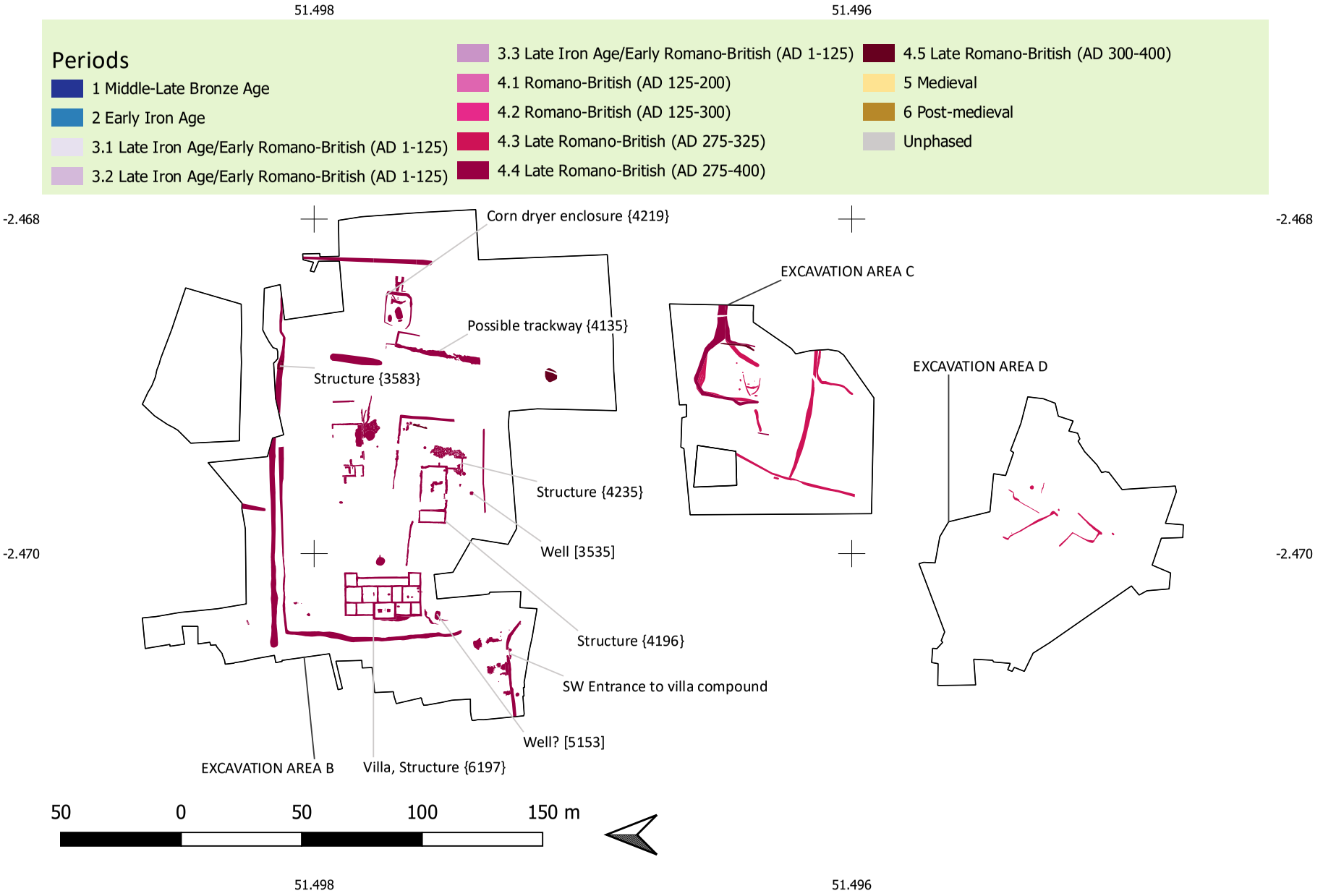


Figure 5.7 Plan of Excavation Area B showing features relating to the use-life of the Roman villa

of demolition. The latest Roman coin found on the site (SF 184), dating to AD 388-395, came from the fill of one of these robber trenches. It seems safest to conclude that the building was constructed at some time during the mid-to-late 3rd century, continuing in use until the mid-late 4th century

The villa complex was largely contained within a large rectilinear enclosure forming a compound. The evidence for the villa complex's boundaries consisted of surrounding enclosure ditches only. Whilst the recutting of some boundary ditches means that they had already filled in and ceased to operate as boundary ditches when the villa compound was defined, it is possible that the boundaries of which they formed a part still existed as hedge lines at the time the villa buildings were constructed. Some of the ditches may have contained flowing water to remove and perhaps utilise the water coming from the site's numerous springs. There was no evidence to suggest that any of the compound's enclosure boundaries were in any way defensive. There was no evidence of a surrounding defendable wall, for example, like that recorded at nearby Gatcombe in north Somerset (Cunliffe 1967).

Two possible entrance ways were noted for the compound. In the southwest corner of Area B a gap in a 3rd to 4th century ditch [5000]/[5015], about 1.2m wide had two large postholes in front of it either side of the gap, with a linking beam-slot forming a gate-way in a gap between two ditches. The ditch segments were also open for the duration the villa was occupied and were backfilled with demolition rubble, probably from when the villa was demolished. It seems likely that ditch [5000]/[5015] formed part of the southern boundary to the villa complex. The gateway through this ditch could not have been the main entrance to the villa compound, as it would not have allowed access to carts. It is, therefore, likely to have been a secondary access point, that may well have provided access into a cobbled yard area. There were surviving patches of cobbling throughout the south-western part of the complex (Figure 5.7).

The main entrance into the complex seems to have directly faced the centre of the main villa building frontage and was placed through the eastern inner boundary of the villa complex which appears to have largely been defined by a pre-existing phase 2 boundary. The boundary marked by phase 2 ditch [3255] formed an entranceway into the inner part of the complex, with a phase 4 wall to the south. As with the more minor south-western entrance, a beam slot crossing the gap is suggestive of some form of gate arrangement (Figure 5.7). The L-shaped foundations for a dry-stoned wall to the south both helped to define this entranceway and may also have assisted in the phase 4 definition of the villa's compound. The shorter east-west aligned part of the foundation trench [4223] was 5m in length, while the north-south aligned stretch [4222] was 10.6m long. The trenches were between 0.35 and 0.70 wide and between 0.09m – 0.4m deep. Up to four courses of dry-stoned sandstone slabs survived above the foundation trench. The shallowness of the trench and drystone construction indicated that these were not load-bearing walls. Rather, they appear to have been low walls defining part of the inner compound perimeter.

To the immediate west of this dry-stoned enclosure wall were the remains of an Area B phase 4 possible trackway. A stony layer was placed in a cut [4135] into the upper fill of phase 2 ditch [4140] (Figure 5.7). The cut had gradual, moderately steep sloping sides with a rounded, undulating base and was 48.32m in length by 3.14m in width and from between 0.45m to 1m in depth. The fill consisted of large sandstone blocks that had been dumped in the whole length of the cut. Sherds of 2nd – 4th century pottery were recovered from between the stones. The very rough, uneven nature of the surface suggested that this may have been the make-up layer for a trackway, surviving where the ditch fills had subsided. Alternatively, it may simply have been a means of making a boggy area drier. The latter hypothesis is given further credence when it is noted that the stone dump sealed stone drain {3564}, which was cut through the fills of the former phase 2 boundary ditch. It is highly likely that the sandstone blocks dumped into the phase 2 ditch were derived from the demolition of Area B phase 3 structure {4226}, which was to the immediate west.

The phase 4 building complex in Area B consisted of a number of buildings. Chief among them was the main villa building on top of the ridge looking eastwards. All the other buildings were to the east of the main villa building on land which descended to the east. These are described in more detail below (Section 5.6). The other structures comprised two large rectangular structures, a small building built into a compound enclosure ditch, a furnace and associated features, and the fragmentary remains of another building. The two larger rectangular buildings formed a rectilinear arrangement with the main villa building.

5.5. A tripartite corridor villa

By the mid to late 3rd century, the main villa building, structure {6197}, had been built (Figure 5.8). It was a tripartite corridor type villa containing thirteen cells (Smith 2002), on the ground floor, and very similar in plan to Brading villa on the Isle of Wight (Collingwood 1930), with a projecting middle back cell for a staircase and projecting rooms at either corner at the front (Plate 5.5). It was located on top of the ridge and appeared

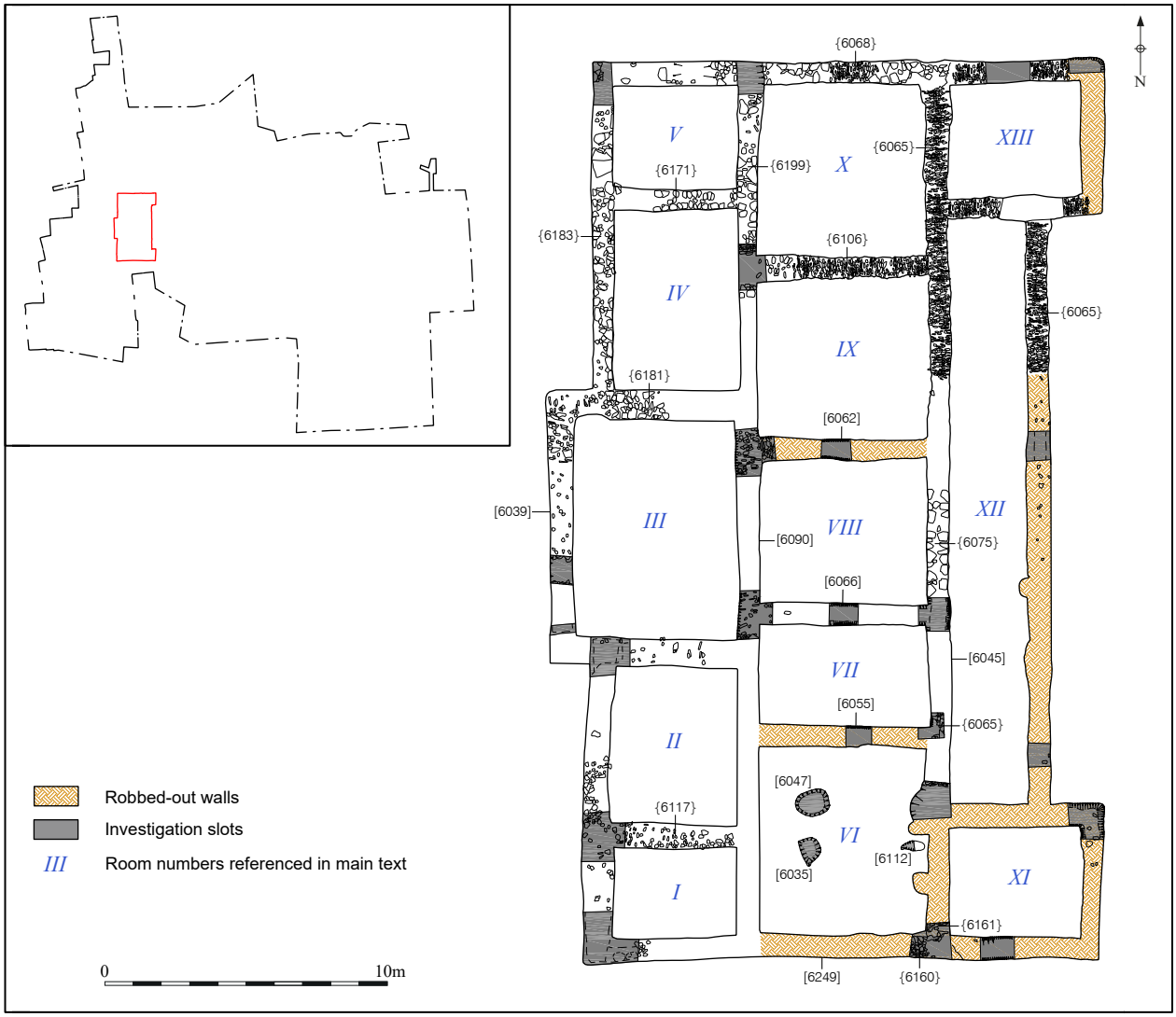


Figure 5.8 Floor plan of the tripartite corridor villa found within Excavation Area B

to have been a single-phase development, neither replacing an earlier building, nor being subsequently rebuilt. Indeed, there was no evidence of major repairs or alterations subsequent to the main building phase. No threshold was recognised for an entrance, but as most of the stone along the east side had been robbed out, and this appeared to be the frontage of the building, it is quite likely that evidence of an entrance had been removed.

The structure, apart from the projections, was rectangular shaped and measured 31.7m long by 17.82m wide in the centre, and 18.17m on the wings. The foundation trenches varied in depth, being shallower where the trench was cut into bedrock and deeper in the natural clay bands (Plates 5.6 & 5.7). This was evidently to achieve even resistance to subsidence (Taylor 2003). In general, the foundations were around 1m wide. The foundations were formed of tightly packed pitched slabs in a herring bone pattern, two to three courses deep. This formed a strip foundation and the stone blocks for the wall were laid on top. Only a small part of walling remained, comprising the northwest corner of the outer wall and a section of partition wall. The surviving remnants were well built in limestone blocks and were about 0.75m thick. The depth of the foundations, and the solid nature of the walls that remained, suggested that the building was at least two storeys high. Two square foundation pads in the projecting middle back room may have been for the staircase to the upper level, and indeed the projection itself was probably designed to contain a staircase. There remaining evidence leaves no reason to assume that the two stories were anything other than built in stone. The lack of rubble on site is likely to be explained by the thorough robbing of the site, perhaps in part to facilitate the construction of the Post-medieval farm buildings in the vicinity, though organised medieval stone robbing was also evident (Section 7.3).



Plate 5.5 Aerial view of structure {6197}, looking west

There was no surviving evidence of a hypocaust or mosaics within the main building. Stone robbing had clearly taken place over the centuries and the modern farm trackway that scoured its way through the middle of structure {6197} had removed almost everything except the foundation trenches. Only one or two possible tesserae were found on site, strongly suggesting that mosaic pavements never formed a substantial part of the flooring of this building, or indeed any of the ancillary buildings. A large column base was found near the northeast corner within the subsoil. Evidently it had been dragged from its original position during ploughing but could have belonged originally to a portico along the front of the structure. Stone roof tile fragments found within the demolition material suggest that at least part of the building had possessed a stone tile roof. More than 90% of the 279.15kg of worked stone recovered from excavation areas A, B and C recorded among the bulk finds comprised hand-made, perforated roofing slates. Some of these were square and others hexagonal in shape, and approximately two thirds had iron nails attached to them.

The main villa building's plan comprised three rows of cells. The western row was symmetrical, with the smallest cells located at the northern and southern extremities. Two larger cells inside these, also mirrored each other, with the largest cell in the middle and projecting to the west. This cell had two square foundation pits [6203] and [6213] in its centre. These, along with the increased size of its internal partition walls, indicate that this space was load bearing and housed a staircase. The central row had five cells presumably equating to five rooms. The eastern row comprised two projecting rooms at the north and south joined by a long corridor. It is possible that at the ground floor level this corridor may have taken the form of a loggia. Of the thirteen cells, evidence for function came only from the corridor and the staircase spaces. None of the likely rooms revealed evidence for their past function, largely because of the lack of floor surfaces or anything much above foundation level. No evidence was found for an internal bath suite.

To the east of the main villa building and roughly central to its outlook was a large pit [3825]. It was circular, cut into the bedrock with very steep, stepped sloping sides and a flat base. It measured 3.7m in diameter and was 0.8m deep. The primary fill appeared to relate to the function of the pit, whereas the secondary fill appeared to relate to abandonment and contained sherds of 4th century pottery. The pit appears to be contemporary with the occupation of the main villa building, its position with respect to that building and its shape and physical character suggest that it may have been an ornamental pond.



Plate 5.6 Foundation trench [6039] – southwest corner, looking northeast



Plate 5.7 Walls {6065} and {6075}, looking north

To the south of the main villa building was another pit [5153], which may have been a well. It was sub-rectangular, with curved corners, and measured 3.6m in length by 2.3m in width. The feature was excavated to a maximum depth of 1.2m, but its full depth was not ascertained. It had sharp, moderate sloping sides towards its top part but vertical sides at a greater depth. The pit cut through two Roman levelling layers associated with the construction of the main villa building. If it was a well, it was either unlined or the lining was robbed out. No other contemporary well was situated close to the main villa building. Well [6031] to the north predated the villa and is likely to have continued in use when the villa complex was established. Well [5056] to the south of the villa appears to post-date its main period of occupation.

Stony surface {4234} was located to the southwest of structure {6197} and to the north of ditches [5015] and [5000] which formed part of the south-west entrance to the villa complex (Figure 5.7). The surface consisted of a mix of blue-grey and pale red sandstone fragments within a light, yellowy grey-brown clayey silt. It appeared to have once covered most of this area, but because of truncation from

ploughing only eight patches survived. Four sherds of 2nd-4th century pottery were recovered from this fragmentary surface. It appears to have been a metalled yard or area of hardstanding to the south west of the main villa building, contemporary with its occupation.

5.6. The villa estate's ancillary buildings

Excavation Area B, Structure {4213}: the bathhouse

On the east side of the main villa building facing its northern wing was structure {4213}, interpreted as the bathhouse for the villa complex (Figure 5.9). This structure was poorly preserved and truncated by ploughing (Plate 5.8). Little survived other than foundations and these were shallow because of truncation. Large sections of the northern flanking wall and eastern end of the building had been completely removed. Structure {4213} was originally rectangular, with the building measuring 31.65m by 13.14m. The eastern third of the structure, consisting of wall section {3200} and foundation (3235), may have been a later extension to the eastern end of the building. There was too little surviving evidence to be certain. Wall {3427}, which would have formed the eastern gable end before any such extension was constructed, appeared sufficiently robust to have been an external wall. The fabric and techniques used to build structure {4213} was the same as the main villa building, with sandstone foundations, limestone walling and a quantity of stone roof tile in associated deposits.

At the western gable end of the building the space had been partitioned to form two square rooms with a corridor in between. Outside the western external gable wall of the northern room was a pit with a stone lining {3689} measuring 2.88m by 1.2m by 0.35m deep. It abutted the outer side of the western wall and was aligned east-west (Figure 5.9). It was cut into bedrock and was straight sided in plan on three sides with a semi-circular western end. It had vertical sides with a flat base. Dry-stoned revetments lined the north, south and east sides and consisted of four courses of squared, faced limestone and sandstone blocks. These were unevenly coursed with no bonding material. The dark fills and heat-affected bedrock base of this pit suggested that burning took place within it. The conclusion is that the pit provided heat for the structure and that the northern room of the western end of structure {4213} was the *tepidarium* of a bathhouse. No evidence was found of a hypocaust, but truncation may have occurred below the level where such evidence would have survived (Section 6.3).

On the southern side of the central third of the building, abutting the interior of the southern flanking wall, was a large rectangular shaped tank or pool [3370]. This was cut into the bedrock with dimensions of 9m long by 3m wide and 1.15m deep (Plate 5.9). It had straighter and steeper sides on its east, west and south sides while the northern end was rougher as the bedrock was broken off along its natural lines of fracture. The base rose up 2m from the eastern end, forming a shallow square shaped

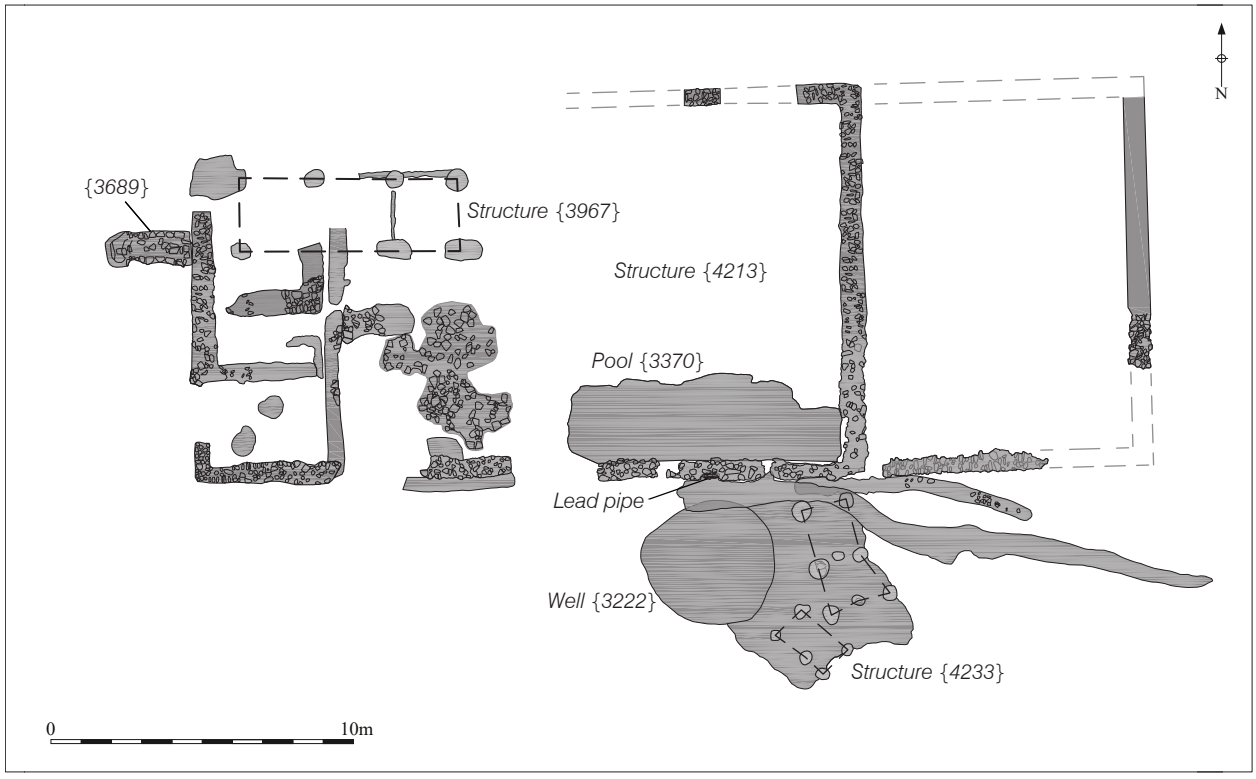


Figure 5.9 Plan of structure {4213} found within Excavation Area B



Plate 5.8 Aerial shot of structures {4213} & {3967} (middle) and {4196} (background), looking south



Plate 5.9 Rectangular pool [3370] within bathhouse, looking west



Plate 5.10 Pool [3370] showing drainage culvert {4218} & walled cavity {3372}, looking west

area separated by a raised ridge from a deeper, 7m long rectangular area. The base was roughly flat, sloping very gently towards the centre on the western and eastern sides. In the centre of the deeper area, there was a narrow channel that started in the western end then descended gently towards the centre, before splitting in two to go north and south. In the pool's southeast corner, the channel continued south through a walled-up cavity {3371}. This cavity was also cut through the bedrock on the south side of the feature that joined to the western end of drainage culvert {4218} (Plate 5.10 & Plate 5.11). There were two more of these features to the east of {3371}, with {3372} in the southeast corner of the deepest part of the feature. Another was to the west of {3371} in the southeast corner of the shallower eastern end of the pool.

This cut feature appears to have been a plunge pool. The water in the pool was released through cavities tunnelled into the bedrock under the external southern flanking wall, where a section of lead pipe (SF 62) was found in situ, housed in drain-cladding tiles (see Section 6.3). The cavities linked to a drainage culvert {4218}, which ran for 17.7m southward away from the bathhouse. The culvert was 0.4m wide and about 1m deep. The culvert had sandstone slabs, roughly placed on the base, set on edge and tightly packed with larger slabs on the sides. Further slabs had been placed flat on the top, to cover the culvert.

Structure {4213} was the bathhouse of the villa complex. The structure was very poorly preserved, so the standard of the building is difficult to evaluate. Ten fragments of painted wall plaster weighing 352g were found in the fills of the fire pit, the plunge pool and the surrounding well structure. The plaster was painted a reddish-pink hue. In the Romano-British period flue tiles were used to allow hot air to travel up through the walls of Roman buildings, especially baths. In Excavation Area B most of the flue tiles came from the bathhouse structure, as well as features and deposits associated with it and the fills of adjacent well [3222] (see Section 6.3). The water supply for the bathhouse is likely to have come from this same well, which lay just to the south, separated only



Plate 5.11 Culvert {4218} showing structure {3371}, looking east

by a drainage culvert which carried water away to the east (Plate 5.12). Springlines were present on the hill, but no evidence that one had been channelled towards the bathhouse was found. The well was circular in plan, measuring 5m in diameter, with near vertical, curved sides. The well was only excavated to a depth of 5m because of health and safety constraints. At this depth the shaft narrowed to measure *c.* 4m in diameter. The total depth of the feature remains unknown.

The latest recut of the well post-dated the initial construction of the bathhouse, as it cut the upper edge of culvert {4218}. Well [3222], as excavated, was probably an expansion of a smaller, original well. The well was backfilled with large stones, probably from when the bathhouse was demolished. The lowest fill that was reached (3272) was a firm dark brown gritty clay, which contained frequent large stones, two pieces Romano-British CBM, and two iron hobnails. Wet sieving sample <194> from the same deposit recovered a copper alloy coin. The coin, SF 196, was minted between the years AD 330-340. A sample of rowan wood from this same deposit provided a radiocarbon date of cal. AD 253 to AD 397. The coin and the radiocarbon date for the primary fill of the well indicate a 4th century date for its use.

To the east of the well was a stony surface (3202), which may have been laid to assist with taking water from the well and reducing muddiness if water was sloshed on to the ground. The stony layer was cut by a group of stone-lined postholes {4233} (Figure 5.9). These seem likely to have supported a roughly L-shaped platform around the east side of the well, and may have been associated with some kind of water-lifting device, such as a wooden force pump (Stein 2004; Stein 2014).

Excavation Area B, Structure {4196}

Structure {4196} was located to the southeast of structure {6197}, the main villa building (Figure 5.10 & Plate 5.13). As with the bathhouse, the structure was rectangular and aligned east to west. It was 23.94m by 11.62m in size and had two cells. The surviving evidence consisted of a foundation trench with a single course of foundations stones, along with sections of surviving wall on the north, west and south sides. The surviving walling was of limestone, as with the main villa building and the bathhouse. Like in bathhouse, the limestone blocks were only roughly dressed, but they were regularly coursed and mortared. There was a gap in the middle of the southern side of the structure that



Plate 5.12 Well [3222], looking northwest

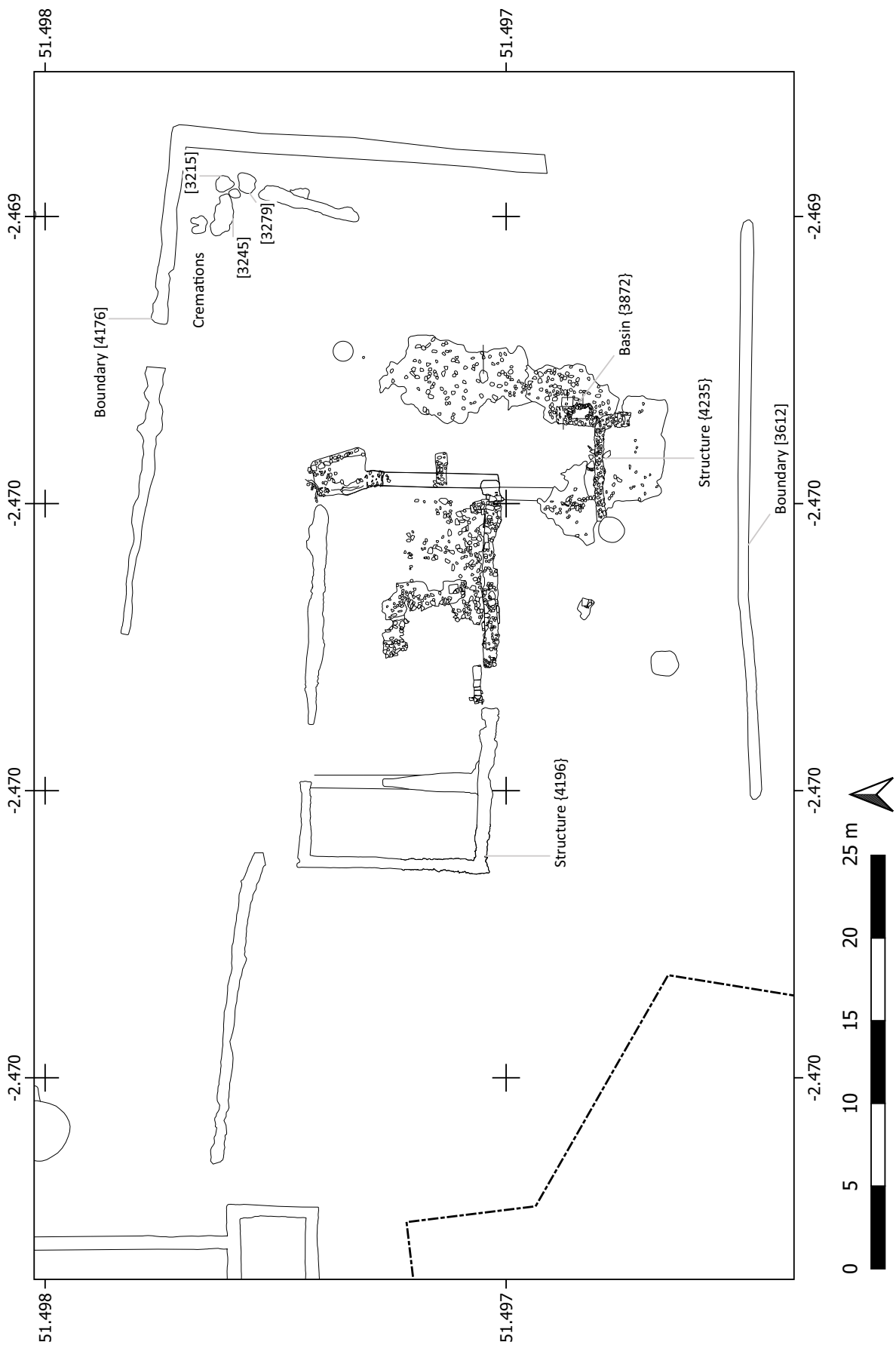


Figure 5.10 Plan of structures {4196} and {4235} found within Excavation Area B



Plate 5.13 Aerial shot of structure {4196} mid-excavation, showing wall {3897}/{3956} & structure {4235}, looking northeast

had a series of flagstones laid down inside the external flanking wall forming a threshold. This was the only clearly identified building entrance in the entire complex. The entrance was around 1.3m wide so had enough width to allow animal access.

North-south aligned partition foundation [3929] formed a narrow room on the west side. The foundation trench was cut into the bedrock and measured 9.73m by 1.2m, with a truncated surviving depth of 0.21m. It had moderately steep sloping sides with a wide, flat base. The foundations comprised tightly packed, slightly angled, red-brown sandstone slabs that were placed on end. The width of the foundations was the same as the foundations of the external walls, suggesting that it was a load-bearing wall. This may mean that the western end of structure {4196} had a loft.

In the southeast corner of structure {4196} a small part of the building's stone floor survived, overlying a roughly cobbled leveling layer formed during site preparation. The floor surface consisted of large angular sandstone flags. The remaining floor area measured 6.95m by 4.49m, with the flagstones angled diagonally to the walls and sloping from east to west. Twenty-three sherds of 2nd century pottery were recovered from between the stones, though it is suggested that these were residual sherds being in the environment when the floor surface was laid. This seems a reasonable hypothesis since the levelling layer underlying the stone floor contained 3rd to 4th century pottery providing a *terminus ante quem* for the laying of the floor surface.

Beneath the floor surface there was a series of stone-lined drainage channels that ran parallel along the inner side of the external walls' foundation trenches, on the north and south sides. These had linking channels that went through the foundations to the outside of the building. The channels were 0.3m wide and about 0.12m deep. They were lined by upright sandstone slabs with the base being either another slab or the natural bedrock. Capping of the drains was achieved by the flagstone floor surface. Clearly the floor surface and the drains went together indicating that the floor surface would have been regularly washed down.

Adjacent to the flagstone floor surface in the south-east corner of structure {4196} was a post-pad. It consisted of a single grey sandstone slab 0.56m by 0.52m, sitting on top of a bedding layer which itself was on top of the cobbled levelling layer. This indicates that the post pad was contemporary with the

flagstone floor. In the north-east corner of structure {4196} was a posthole which was circular in shape and with a diameter of 0.52m and a depth of 0.35m. It had near vertical sloping sides with a flat base. The fill contained packing stones on the west and north sides. The posthole appeared to be contemporary with the building and may have been for the same purpose as the post pad in the south-east corner. It seems then that the roof was supported by timber posts, suggesting a relative lack of sophistication in the construction of structure {4196}.

Outside the south-east corner of structure {4196}, were the remains of a cobbled surface. This may have been originally the same surface as that laid down to level the area before structure {4196} was built but doubtless it continued to provide a hardstanding surrounding the structure once it had been built. The survival of the surface was patchy. It was made up of tightly packed sandstone pebbles, cobbles and occasional slabs and was approximately 0.25m thick. It contained two sherds of 2nd – 4th century pottery. Part of its south-western side was overlain by a dirt layer that formed whilst the surface was in use and contained sixty-four sherds of 3rd – 4th century pottery. This stratified pottery sequence fits with the surface and associated building being constructed in the late 3rd century and used throughout the 4th century.

Structure {4196} and its associated hardstanding were enclosed by three contemporary boundaries on the east, south and north sides (Figure 5.10). To the north and east the boundary was formed by ditch group [4176]. The northern east-west aligned stretch of the ditch had a 2.7m gap that appeared to represent an entranceway on the north side of the enclosure. The ditch varied in width from 0.6m – 1.5m and was 0.26m – 0.49m deep. It had moderately steep sloping sides with a flat base cut into bedrock. The single fill contained pottery sherds spanning the 1st to 4th centuries AD. To the south of structure {4196} the enclosing boundary was marked by ditch [3612]. Ditch [3612] varied in width from 0.5m – 1.5m and was up to 0.33m in depth but as it was clearly truncated this depth probably only represents survival and not the original depth. It had steep sloping sides with a flat base. The single fill was the same in colour and consistency as that of ditch [4176] and contained sherds of 2nd – 4th century date. The similarities in character between ditches [4176] and [3612] indicate they formed part of the same enclosure, probably delimited by a hedge and ditch. There was no indication of an enclosing boundary to the west, with the preservation not being poor enough to think that all traces of such are likely to have been removed. The enclosure related to structure {4196}, therefore, appears to have been open to the west. Here the gable end of structure {4196} faced the main residential building of the villa. Any need to close off the space around structure {4196} may have been achieved through temporary measures which have left no archaeological trace.

A well-drained flagstone floor, a putative loft at one end of the building and a surrounding enclosure could be taken as evidence of a farm building that was possibly used for housing animals. The presence of human cremation burials within the enclosure, however, may counter that interpretation. As previously noted, cremation burial had started earlier in this part of Excavation Area B, with one of the group of cremation burials immediately inside the north-eastern corner of enclosure ditch [4176] dating to before the later 3rd century (Section 5.7). The remainder, however, all appear to date to the late 3rd to 4th century and to have been contemporary with the use life of the villa complex.

The water supply to structure {4196} appears to have come from well [3535], which was located to the south of the entrance (Figure 5.10). It was sub-square shaped with rounded corners and measured 1.64m in length by 1.49m in width. The well was excavated to a depth of 0.94m but the feature was not bottomed for safety reasons. The top of the cut had sharp, vertical sides. No finds were recovered from the fills. It lacked any obvious lining, but it appeared that the lining was probably stone and had been robbed out. The well cut appeared to be contemporary with the villa complex and contemporary with structure {4196}.

Cremation nos. 6, 7, 8, and 9 of the central cluster broadly followed the line of enclosure ditch [4176], being nestled in its north-west corner. All contained fragmented cremation urns made of pottery of either 2nd to 4th, or 3rd to 4th century, date. Two of the cremation pits contained two cremation vessels each, and the other two single cremations.

It seems unlikely that members of the villa owner's family would have utilized the edge of what appears to be a working area for burial. In his recent consideration of rural burial practices, Alexander Smith notes that within villa communities there was likely to be social separation of burials reflecting the hierarchical nature of Romano-British society (Smith *et al.* 2018: 248). The late 3rd to 4th century cremation burials at Lyde Green may have been of servants or labourers. Certainly, there was little to indicate high status. Even so, the presence of these cremations raises questions as to the actual nature of the enclosure within which they were included and thus the role of structure {4196}.



Plate 5.14 Well [3535], looking west

Excavation Area B, Structure {4235}

To the south-east of the south-east corner of structure {4196} was a small dry stoned structure {4235} of which only fragments survived (Figure 5.10). An 'L'-shaped wall 7.4m in length and 0.6 to 0.8m wide by 0.3 m high in three courses was built on top of levelling surface (4237). No foundation cut existed. This relatively fragile building technique accounts for the fragmentary nature of the structure. Within the angle of the 'L' was a stone lined pit {3872}. It consisted of a single tightly packed row of sandstone slabs that were laid on end using a drystone building technique. It formed a rounded rectangular shaped bowl which measured 1.4m long by 0.86m wide and was 0.2m deep. The function of this basin-like structure was unclear, but it could have been an animal feeding trough.

To the immediate north of the basin was a posthole group {4238} which consisted of a central row of four postholes, a northern row of three postholes and a single posthole to the south. The postholes were cut into bedrock and were generally sub-circular to rectangular in shape. The postholes varied between 0.33m and 1m in length by 0.3m to 0.7m in width and 0.18m to 0.5m in depth. The postholes were well constructed with stone packing or had sandstone slabs lining the sides and with a slab as a post-pad in the base. The fill of posthole [4082} produced a radiocarbon date of late 3rd to 4th century AD. The postholes represent a small but substantial structure that was clearly a phase 4 structure contemporary with the main villa building and its associated structures. The form and function of the structure, however, was unclear.

Excavation Area B, Structure {4219}

The easternmost of the structures found in Area B phase 4 was a rounded rectangular foundation trench {4219} surrounding a cut feature forming a corn drying oven (Figure 5.11). The structure was on flat ground at the bottom of the ridge and probably largely out of sight of the main villa building. Structure {4219} was 14.16m long by 11.25m wide and aligned east- west. The foundation trench varied in width from 0.25m on the west side to 0.65m – 0.7m on the north and south sides, and 1.3m on the east side. It is highly unlikely that the trench ever supported anything more than a low non-load bearing wall. The entrance to this small enclosure appeared to be at the western end.

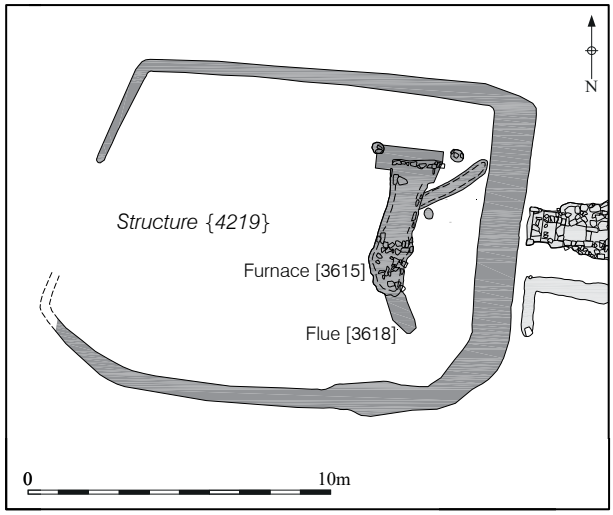


Figure 5.11 Plan of structure {4219} and furnace 3615 found within Excavation Area B

Within the eastern end of this small enclosure was a pit with the features of a corn drying oven, the long axis of which was roughly north-south (Figure 5.11). The corn drying oven cut a narrow gully containing a coin dated between AD 271 and 274, providing a *terminus post quem* of AD 271 for its construction. It was sub-rectangular shaped with a straight, cornered northern end and a rounded southern end. It had sharp, vertical sides and a slightly rounded base, measuring 4.5m long by 1.5m wide by 0.3m deep. A series of medium-sized un-worked sandstone blocks lined the sides of furnace with three very rough random courses at the north end and a single course for the remaining sides. The stones at the northern end were bedded using a firm clay. The lower fill within the pit was a loose black silty clay that had a thin layer of charcoal, 0.02m thick throughout it. The natural clay at the base of the kiln had been heat-affected and was an orangey red colour compared with surrounding natural clay that was a light yellow-brown colour. There were two postholes on either side of the northern end and at the southern end was a channel linked to the pit which appeared to be a flue, with the stone lined heat affected pit being the chamber of a kiln.

The flue was in the southeast corner of the kiln and was aligned roughly northwest-southeast with its northern end joining the southeast corner of the kiln chamber. It measured approximately 3m by 1m in plan with a depth of 0.3m. Starting at the northern end where it joined on to the furnace, the flue was a single channel for the first 0.4m; a ridge of the natural clay was left in the middle and the channel split in two before re-joining. After 0.45m it split again forming two channels for 0.5m in the same direction before re-joining and terminating. Within the most easterly channel there were some sandstone blocks which appeared to be the remains of a stone lining for the flue.

Taken together the flues and chamber appear to be the remains of a grain drying kiln. The two postholes at the northern end are likely indicative of a superstructure forming a drying floor above the fire pit formed by the stone lined chamber. The wall surrounding the kiln and forming structure {4219} seems likely to have formed a wind break. Structure {4219} and the kiln within it appear to be a larger version of the grain drying arrangements from phase 3. When the phase 3 grain drier was demolished to make way for the main villa building this new replacement is likely to have been built.

Excavation Area B, Structure {3583}

Structure {3583} was in the northeast corner of Area B at the bottom of the ridge to the north-east of the main villa building (Figure 5.12) and was the best-preserved building within Area B. Its preservation was aided by it having been fitted to the profile of the villa compound's enclosure ditch [4181] (Plate 5.15). It was rectangular shaped, 3.85m in length by 2.5m in width and used a drystone construction technique. Between 11 to 20 courses of roughly hewn sandstone slabs survived, standing up to 0.9m high. The flanking walls to the north and south were built into the slope of ditch [4181]. The slabs were randomly coursed, with two narrow rectangular openings along the northern side at the western and eastern gable ends of the structure, the eastern end being larger than the western. Stone roof tiles in the deposit that filled the structure's chamber, following the partial collapse of the structure, indicate that it had a stone tiled roof.

The purpose of structure {3583} was not immediately obvious. It was small and specifically designed to fit within the villa compound enclosure ditch, along which a spring line rose throughout the duration of the excavation. The openings into it suggested that they were to allow the flow of water through the structure, with water flowing from west to east. The smaller western opening may have been intended to increase the water pressure as it entered the structure, with the larger eastern opening allowing easier egress of the water. Springs were encountered throughout the excavation, located all along the east side and top of the ridge. It is possible that the water from one or more of these was once channelled into the enclosure ditch, or the ditch itself was located to manage an existing spring. The head of water is unlikely to have provided enough volume and energy to have powered a water mill, but the structure may have housed some form of water lifting device. While agricultural irrigation is a possibility, perhaps the most likely function of this small structure positioned to use a water flow was a latrine block. The structure was at some distance from the domestic quarters in the main villa building, however, so hardly conveniently located. This distance and its lower position, downwind from the prevailing

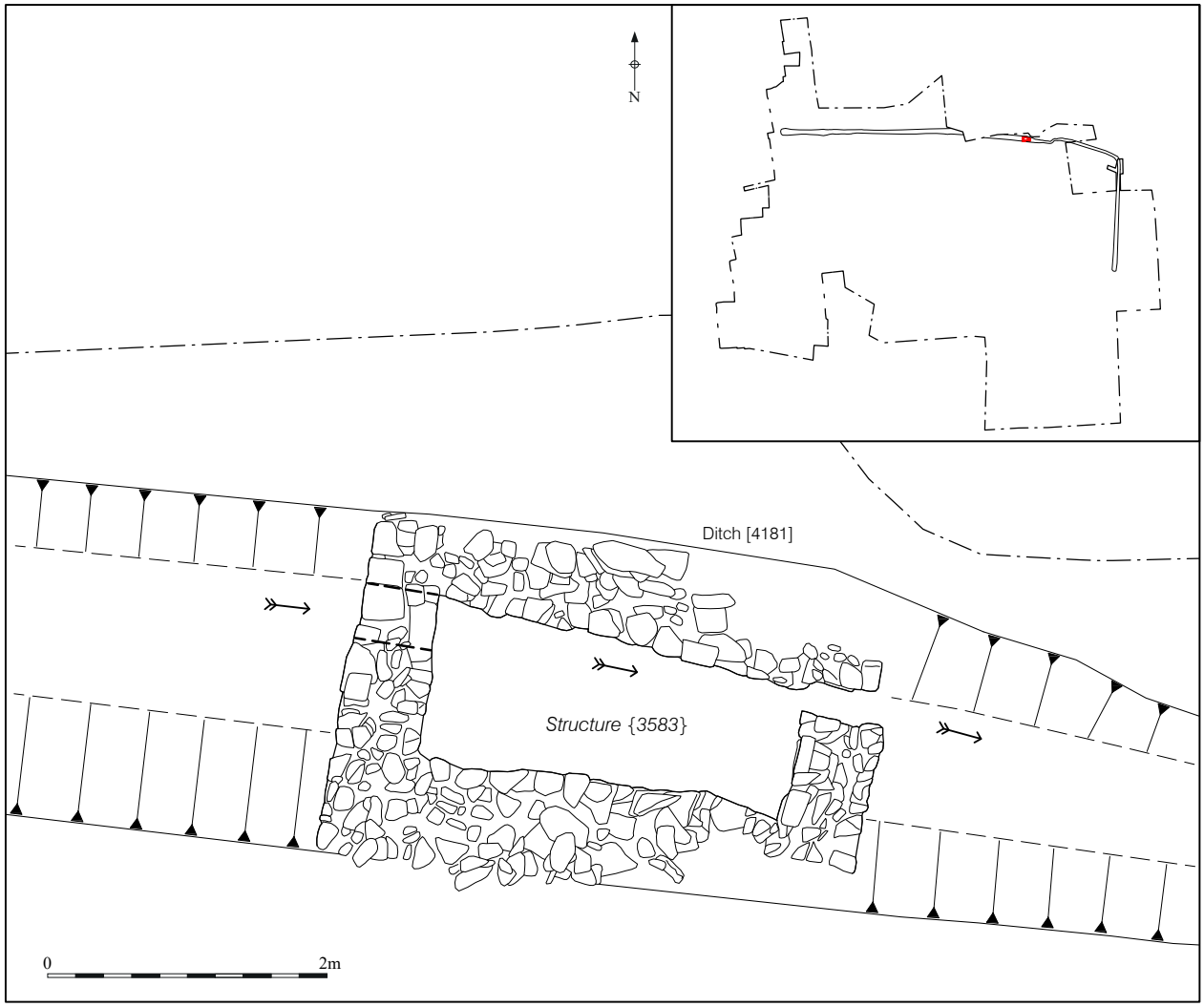


Figure 5.12 Plan of structure {3583} found within Excavation Area B



Plate 5.15 Shot of structure {3583} within ditch [4181], looking east

wind direction, may have been deliberate to reduce any unseemly visual or other sensory impact on the inhabitants of the villa. Mitigating any unpleasantness from the structure's function may have been a more important criterion than the convenience of proximity. Five sets of iron shears were found in ditch fills close by. Whether this indicates that the structure was utilised for washing fleeces and for personal grooming is impossible to say.

Stratigraphically the structure was either built at the same time as ditch [4181] was excavated, or some time afterwards. The lowermost fill had a character that suggested formation in waterlogged conditions. The fill that formed after the building fell into disuse and had partially collapsed, (3829), suggested abandonment in the 4th century AD. A radiocarbon date from this deposit yielded a date of AD 218-397. Structure {3583} appeared to have been left to ruin after it went out of use and collapsed inwards rather than being demolished like the other buildings forming part of the villa complex.

5.6. Areas C and D as part of the villa estate

All of the archaeologically evident non-agricultural activity dated to the 3rd and 4th centuries took place within Area B. Areas C and D appear to have had only an agricultural function during this period, with the exception of funerary practices (see below). The main archaeological evidence relates to the modification of existing plot boundaries.

Area B phase 4, which covered the lifespan of the villa complex, equated with phases 6 and 7 in Area D. At the beginning of phase 6 in Area D multi-celled structure {1650}, which appeared to date to the 2nd-3rd centuries, had been abandoned. That it seems to have gone out of existence at the same time as the tripartite villa was built seems to link the two events, strongly suggesting that Area D building {1650} was the predecessor of the tripartite villa. The building seems to have been partially demolished in phase 6, probably at the end of the 3rd century AD. Certainly the western end had been demolished, because a stone-lined culvert cut through the westernmost foundation trench. This culvert was one of eight contemporary culverts or drains. The drains consisted of roughly worked sandstone slabs set on either side of a V-shaped trench, lining it, large sandstone slabs were placed on top of the V forming a triangular slabbed drain. The culverts were more box shaped but with stones lining the sides only and not the base, again large slabs were placed over the culvert.

During Area D phase 7, dated to the 4th century, there was some adjustment and refashioning of the enclosure pattern established in the 2nd to 3rd centuries. To a large extent, however, existing boundary lines were reinforced and renewed. The new boundaries integrated into the existing boundary system, appear to have created two small, irregularly shaped enclosures, located to the west and south of former building {1650}. By this time structure {1650} had been demolished and levelled completely.

5.7. Romano-British burial

Cremation burials

Across the excavations a total of ten pits containing broken Romano-British reduced coarseware jars in various states of preservation were identified as cremation burials. Nine were located in Area B and one in Area D. A selection of six of the ceramic cremation urns that were able to be reconstructed is illustrated as part of the discussion of the Roman pottery in the following chapter (Figure 6.2), along with the only accessory vessel that was found. All of these vessels fit within a ceramic tradition of the mid-2nd to mid-3rd century AD. The majority is thought to date before AD 200-220 and therefore predated the construction of the main stone villa building. Attempted radiocarbon dating of bone samples from two of the cremations (nos. 4 and 5) failed due to lack of collagen. Each of the cremations that was identified was block-lifted and excavated back at the Wardell Armstrong offices. All of the urns yielded cremated human remains and the majority contained some cremated animal bone as well (Section 5.9). An additional pit found in Area B contained no urn but did yield cremated animal bone when sampled. A number of small finds were found within the cremation burials and these are described in Section 6.4 below.

The nine cremation burials in Area B were found in three distinct locations (Figure 5.13). A group of five were found in close proximity to one another (Cremation nos. 1-5), all cut into the upper fill of an 'L'-shaped ditch south of structure {4226}. These are described as an eastern cremation cluster. A sixth pit, of similar dimensions and spatially part of this group of features, yielded no evidence of an urn, or human remains. Consequently, it has not been included in the numbered cremations, but is likely to have been a cremation that was badly truncated by ploughing. Another group of four cremations, described as the central cremation cluster, was found in the north-east corner of an enclosure which surrounded structure {4196} (Cremation nos. 6-9). This group includes Cremation no. 9, which contained no urn or cremated human bone, but did contain cremated horse/cow bone and a 4th century coin of the House of Constantine. Separate from the other two groups of cremations in Area B was Cremation no. 10. The urn was recovered partly from pit [3229] and partly from the fill of N-S aligned linear [3314], which truncated it and appears to

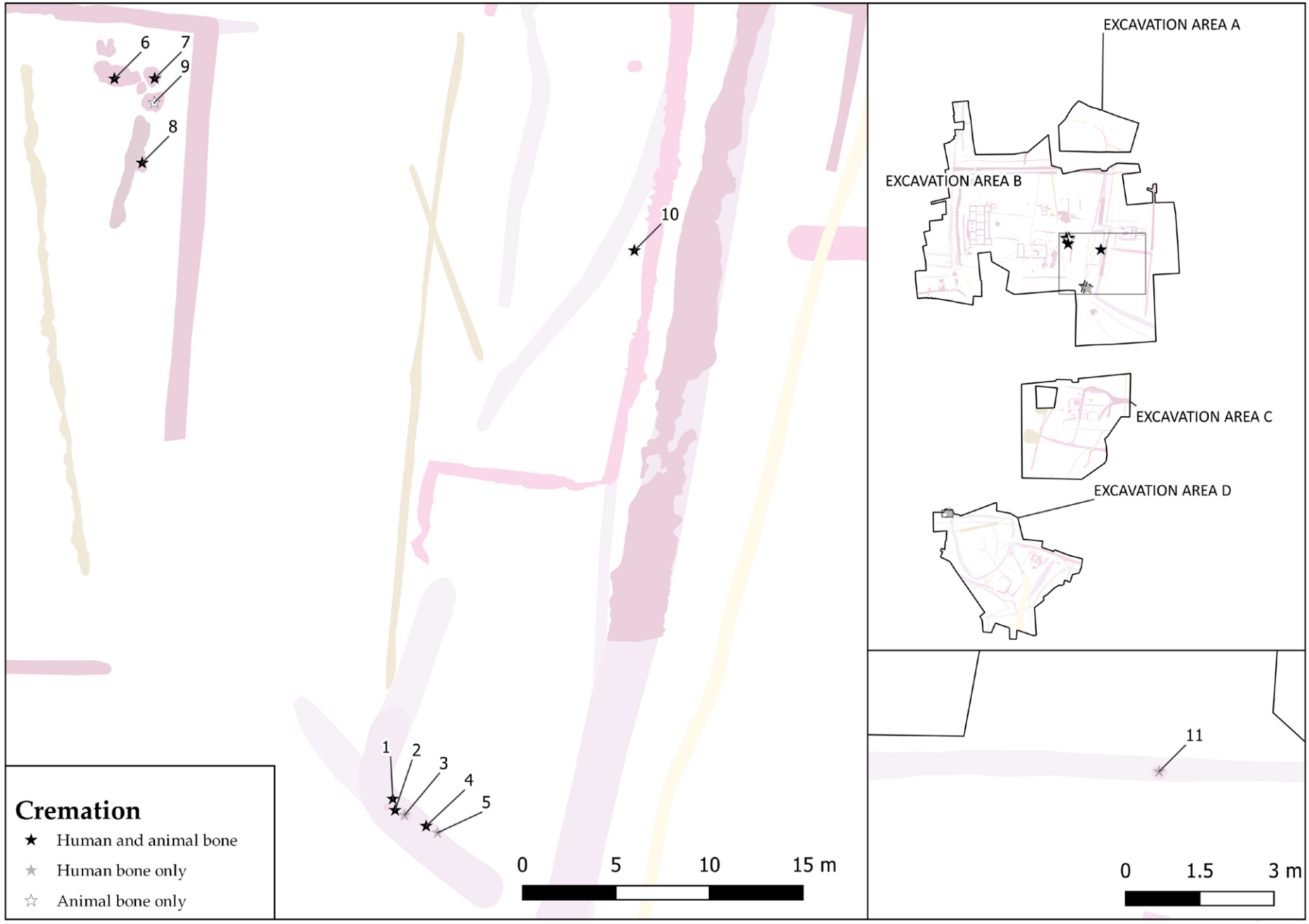


Figure 5.13 Plan showing the location of the cremation burials found in areas B and D



Plate 5.16 Urn from Cremation no. 10

have pre-dated structure {4226} (Plate 5.16). In Area D Cremation no. 11 was cut into the upper fill of a ditch in the north-west corner of the trench (Figure 2.11). The pit had been badly truncated by ploughing, with only a few centimetres of the base of the urn remaining in situ.

There was no apparent evidence of features indicative of a pyre site, or specific pyre debris deposits within the excavation areas. It is reasonable to assume that pyre sites would have been located away from important areas of habitation (McKinley 2008: 171). Very little charcoal was recovered from the cremation burials and no pyre timbers were present. Stones were recovered from all cremation burials excluding numbers 2, 6, 8 and 10. Animal remains were recovered from virtually all deposits with the exception of cremations 3, 5 and 11. Analysis of the faunal remains has revealed that a number of different species were placed on the pyre, or their remains were present in the location upon which the pyre was set. These included the remains of horse/cow (Crem. nos. 6, 8 & 9), pig (Crem. no. 1), sheep, goat and chicken (Crem. nos. 1 and 7).

A possible explanation for the different locations of broadly contemporary cremations within what appears to be the same property may be social status. Cremation no. 11 in Area D may represent a deceased member of the farmstead owning family, being close to the pre-villa centre of occupation, whereas the contemporary cremations in Area B might represent the labour force. A further speculation could see the landowning family changing from the cremation rite to cist burial during the occupation of the Area D farmstead, perhaps at some point in the 3rd century, and continuing with that form of burial during the occupation of the villa. The labour force on the other hand may have continued to use cremation as a burial rite.

Cist graves

Three cist graves were found within the areas excavated, one in each of areas B, C and D. The first was located to the north of the outer enclosure ditch of the villa complex in Area B. The second was cut into the outer edge of the western side of the rectangular enclosure in Area C. The third and final cist grave was to the north-west of the 1st to 2nd century AD D-shaped enclosure in Area D. The graves in Areas B and C were more or less identical in character, but the grave in Area D was constructed slightly differently to the other two. The graves in Areas B and C used single stone slabs for the sides and base whereas that in Area D was constructed using several slabs for both the base and the sides. Given the chronology of likely occupational activity in the three areas, and, assuming that the graves were linked to this activity, it is considered that the cist

Table 5.1 Contextual information on cremations excavated in Areas B and D

No.	Cut no.	Urn	Finds	H. bone	A. bone	Fills	Preservation
1	[3329]	Illus. no. 89	SF 220	y	y	pit (3330), urn (3331)	0.18m deep
2	[3320]	Fragments	-	y	y	pit (3321), urn 3303	0.2m deep
3	[3336]	Illus. no. 85	-	y	n	pit (3337), urn (3335)	0.33m deep
4	[3333]	Illus. no. 83	SF 218	y	y	pit (3334), urn (3332)	0.2m deep
5	[3326]	Illus. no 84	SF 216, 219	y	n	pit (3327), urn (3328)	0.28m deep
6	[3245]	Illus. no. 87	Illus. no. 88	y	y	Acc. vessel (3207), urn (3208)	0.2m deep
7	[3215]	Illus. no. 86	-	y	y	pit (3209), urn (3214)	0.2m deep
8	[3349]	Fragments	-	y	y	pit (3350), urn (3316)	0.15m deep*
9	[3279]	None	SF 210, 337	n	y	pit (3240)	0.36m deep
10	[3229]	Plate 5.20	-	y	y	pit (3230), urn (3213)	0.2m deep*
11	[1282]	Fragments	-	y	n	pit (1283), urn (1284)	0.12m deep*

Key: * truncated by later feature



Plate 5.17 Pre-excavation shot of Cist burial 1, looking north



Plate 5.18 Cist burial 1, looking north

grave in Area D may have been earlier than the graves in Areas B and C.

Cist burial 1, found to the north of the villa and outside the surrounding enclosure ditch in Area B (Figure 2.6), was aligned east-west and was rectangular shaped measuring 1.5m in length by 0.64m in width by 0.32m deep. It consisted of flat, thin and lightly worked sandstone slabs (Plate 5.17 & Plate 5.18). Two single, long, rectangular slabs were placed against each side of the grave cut, with a third on the base abutting them. Smaller square shaped slabs were placed at either end of the grave, with a larger, slightly thicker single slab sealing the cist. The grave appeared to be empty, with no evidence of an inhumation or finds from the fill of the cist. Although there was no stratigraphic or finds evidence to indicate date, the grave's position outside the villa complex enclosure suggests that the cist related to the occupation of the villa complex.

The cist grave found in Area C was cut into the western edge of enclosure ditch [2468] close to the south-west corner of the enclosure (Figure 2.9). The grave cut measured 1.9m by 0.75m by 0.5m. It had vertical sides, with a flat base and was aligned roughly north northeast – south southwest. It was covered by a single, large limestone slab that was laid flat and was roughly dressed. It measured 2m by 0.55m by 0.03m. The sides and ends of the cist comprised thin, dressed rectangular shaped slabs, with straight faced edges that were laid upright. The sides and the base were formed of single slabs. The fill of enclosure ditch [2468] through which the grave was cut contained plentiful 3rd-4th century pottery. Consequently, the grave could not have been dug and the cist built until probably the late 3rd century at earliest.

Seven sherds of 2nd-4th century pottery were recovered from the fill of the grave along with two iron boot plates, SF 122 (Plate 5.19) and SF 123 and iron hob nails, SF 124. The presence of hobnailed footwear strongly indicates that the grave had been used and had once contained an interred corpse. The stratigraphic and finds evidence indicates a 4th century date for the grave. The similarities of construction with the cist in Area B suggest a contemporary date for that cist. Like the cist in Area B it is highly likely that the cist grave in Area C relates to the occupation of the villa complex during the late 3rd to 4th centuries.

In Area D Cist burial 3 was located to the west of the northwest corner of D-shaped enclosure [1005] (Figure 2.11). It was aligned roughly north-south and measured 2.17m by 0.6m by 0.45m. It was rectangular shaped with sharp, vertical sides and a flat base. The grave contained no human remains and only one artefact. The cist consisted of a single large sandstone slab that lay flat on top of the cist. The sides were lined with three roughly dressed sandstone slabs each, these being placed upright. The ends of the cist comprised more roughly hewn upright slabs compared to the sides with a single slab at the north end and two slabs, one behind the other at the south end. The base was made up of seven large and two small sandstone slabs laid flat. A single iron hobnail was recovered from the primary fill. This might suggest that a body with hobnailed footwear had been in the grave at one time. The cist grave was close to a cremation burial (1284), less than 3m away, suggesting that it lay within a defined burial area. The



Plate 5.19 Cist burial 2 showing iron boot plate SF 122 in situ, looking north

cremation burial appeared to be of 2nd-3rd century AD date, contemporary with the building in Area D that is assumed to be the farmstead predecessor of the later villa in Area B.

Although all the cist graves lack human remains, the evidence of footwear in the graves in Areas B and D is strongly indicative that both did have interments. The lack of bodies in all three cists may be due to the total decay of the skeletons, though animal and human bone did survive, if poorly, in other contexts at Lyde Green. Given what appears to have been a deliberate demolition of most of the villa complex on abandonment of the complex, perhaps it can be suggested that the cists were opened and the remains removed in what may have been a planned movement of the villa family with their ancestors to a new location. If this is the case, then it is a further indication that the demolition of the villa was planned and undertaken by the family that owned it.

5.8. Human remains

By Megan Stoakley

This section concerns the analysis of the human bone recovered from the fills of the cremation burials from excavation areas B and D, and disarticulated neonatal bones redeposited in a levelling layer which was laid down following the demolition of bathhouse structure {4213} in Excavation Area B. The ceramic cremation urns themselves are described in the next chapter, Section 6.2.

Analysis of bone recovered from cremation burials

A total of 6.59kg of cremated bone was recovered from 13 deposits associated with the 11 cremation pits described above. Ten of the pits were excavated in Area B and one from Area D (Table 5.1). All cremation urn deposits contained a mixture of human and animal bone, with the exception of those from cremation nos. 3 and 5, which contained only human bone. The fill of cremation pit no. 9, which had no urn, contained only animal bone. The total weight of the cremated bone recovered in a single context at Lyde Green ranged from 25g to 1377g, with a mean weight of 507g per context. Although complete transferral of human bone from a pyre to a cremation urn is unlikely, a custom of deliberate selection of bone from the pyre for inclusion in a cremation burial was commonly practiced in the past (McKinley 1994). However, the weight values obtained for the cremation burials at Lyde Green were at the lower end of the range normally obtained for archaeological cremation burials (Gonçalves *et al.* 2015; Wahl 1982: 25). This is not surprising, given that the majority of the cremation pits had been disturbed by ploughing and few of the urns were recovered with the entirety of their original fill intact.

Based on the assumption that there was no mixing of bones between the cremation urns, the minimum number of individuals (MNI) represented across all cremation burials for this time period is 16. Human bone from most urns represented a minimum of one adult individual, but several of the urn deposits contained multiple individuals. This could be because multiple individuals were burned upon the pyre, or because human bone from previous cremation events was present when the bone was collected to be put into the urn. One cannot exclude the possibility that bone from the same individual may have been mixed between the excavated cremation burials, which would imply a lower MNI for the whole assemblage. The burial of more than one individual within one cremation deposit is a common occurrence for the Romano-British period, with both adults and juveniles interred together (McKinley 2008, 175). It should be noted that the weights of some of the cremated bone from the burials containing multiple individuals do not necessarily correlate e.g. cremations 2, 3, 5, 6 and 8 contain single individuals with bone weights ranging from 261g to 1377g while cremations 1, 4 and 7 contain multiple individuals with bone weights ranging from 488g to 1141g.

For some individuals, it was possible to determine biological sex and estimate a range for age-at-death (Table 5.2). Biological sex determination was not possible for the juvenile remains. From within excavation Area B, the urn from cremation burial 7 (Vessel no. 86) contained the remains of a minimum of two adult individuals (at least one probable male, with one individual aged approximately 40 – 44 years). The urn from cremation burial 1 (Vessel no. 89) contained bone from three adult individuals (all of indeterminate age, but at least one probable male). The urn from cremation number 4 (Vessel no. 83) represented one adult (of indeterminate age and sex) and two juveniles (aged approximately 5-8 years and 8-11 years). For deposits believed to represent the remains of one individual, cremation numbers 2, 5 (Vessel no. 84) and 8 each contained the remains of an adult of indeterminate age. The individual contained within the truncated urn associated with cremation 8 was categorised as probably female, but sex was indeterminate for the individuals from cremation burials 2 and 5. Two cremation burials, numbers 3 and 6, each contained human remains of a single, probably male, 'older adult'. In fact, cremation burial 6 contained an urn (Vessel no. 87) and an accessory (Vessel no. 88), with human remains being recovered from within both. A much greater quantity was contained within the urn and it is possible that the remains from the two vessels relate to the same individual. The badly truncated urn from Cremation no. 11 in Area D contained the remains of two individuals; a young adult (aged approximately 20

Table 5.2 The Human Remains: summary of the assemblage's state of preservation

No.	Area	Deposit	H. bone	A. bone	Bone state	Preser.	MNI	Age (Human)	Sex	Total bone weight (g)
1	B	3331 (urn)	y	y	brn/dark blue	moderate	3	all adults	-	927
2	B	3321 (pit)	n	y	white	poor	-	-	-	25
2	B	3303 (urn)	y	y	unburnt	moderate	1	adult	-	354
3	B	3335 (urn)	y	n	brn/dark blue	v. good	1	45+ years	male?	887
4	B	3332 (urn)	y	y	brn/dark blue	good	3	8-11 years/5-8 years/adult	-	488
5	B	3328 (urn)	y	n	white	moderate	1	adult	-	1377
6	B	3208 (urn)	y	y	unburnt	good	1	45+ years	male?	517
6	B	3207 (ves.)	y	y	dark grey/white	good	1	adult	-	70
7	B	3214 (urn)	y	y	dark blue	good	2	adult; 40-44 years	male? (1)	1141
8	B	3213 (urn)	y	y	white; dark blue	good	1	adult	female?	261
9	B	3240 (pit)	n	y	dark blue/white	good	-	-	-	203
10	B	3316 (urn)	y	y	white	moderate	1	juvenile	-	25
11	D	1284 (urn)	y	n	white/light blue	good	2	< 12 years/20-35 years	-	345

– 35 years) and a juvenile (aged less than approximately 12 years). The only remarkable spatial patterning between the two main clusters of cremations is that no cremated bone identifiable as being from juveniles was recovered from the central cluster, located close to the north-east corner of Structure {4196}.

Overall, preservation of the cremated human bone was 'moderately good' or 'good', with bone from Vessel no. 85 most well preserved. In terms of degree of fragmentation, all of the cremation urns contained some bone fragments larger than 10mm. Many of the identifiable bone fragments, notably the limb bone fragments, were rounded in appearance but with little damage to edges, and warping from dehydration was present on many cranial and post-cranial elements. By contrast, many of the cremated bone fragments recovered during the micro-excavation process, and from the 2mm and 1mm fractions during the environmental sieving, were very rounded with quite worn edges. This indicates that some fragmentation occurred during the post-excavation process. Some damage to the remains will have occurred after the cremation itself, especially with actions such as raking or winnowing the pyre for the remains to be interred.

When split by fraction sizes, the larger fragments of cremated bone were recovered from the 6.3mm fraction (mean bone weight 1kg+) followed by the 2mm fraction (mean bone weight 513g), the 4mm fraction (mean bone weight 435.5g) and the 1mm fraction (mean bone weight 28.5g). The discrepancy between the 2mm and 4mm fraction is likely to be a consequence of the greater bone weight range between the two mesh sizes (2mm = 4g-511g as opposed to the 4mm = 21g-850g).

Table 5.3 The Human Remains: measurements of bone fragmentation

Crem. no.	Deposit	Smallest frag size (mm)	Largest frag size (mm)
1	3331	4.11	84.1
2	3321	3	14
2	3303	4.12	120.4
3	3335	1.1	100.4
4	3332	3.9	100.2
5	3328	4.2	90.8
6	3208	50.2	59.4
6	3207	2.2	5.37
7	3214	5.27	60.3
8	3213	4.3	46.2
9	3240	3.1	11
10	3316	1.2	50
11	1284	2	41

A wide range of skeletal anatomical elements was recorded in the cremated human bone assemblage. Present in virtually all burials were cranial fragments, ribs, lower limb bone portions (particularly the femur) and fragments of vertebral bodies. Vertebral spinous processes were largely absent; anatomical elements which were rare in the assemblage include phalanges, teeth, patella (minimum 1), scapula, talus (minimum 1), sacrum (minimum 1), os coxae and metacarpals/metatarsals. Upper limb bones, including the humerus, radius and ulna, were recorded, although the most frequently observed element was the distal humeral condyle.

Evidence of pathological lesions and trauma was only observed in the cremated human bone from the fill

of the urn within cremation number 3 (Vessel no. 85). Schmorl's Nodes were observed on several superior surfaces of the lower thoracic and lumbar vertebrae. These lesions are associated with the degeneration of the intervertebral discs, where the disc contents exert pressure on the vertebral body surfaces. Although their specific aetiology is unknown, the nodes are seen in individuals who have suffered trauma, or who have undergone prolonged periods of heavy manual labour (Manchester and Roberts 2010: 140-141). Other factors such as infection, osteoporosis and neoplastic disease may weaken the joints and would allow such nodes to develop.

Other pathologies observed on the individual from cremation burial no. 3 include Grade 2-3 osteophytic lipping along a fragment of scapular spine and on virtually all vertebral bodies (Brothwell 1981: 150). Several of the larger thoracic vertebrae displayed evidence of substantial osteophytic bone-forming. Whilst it was tentatively suggested that this condition could have been Diffuse Idiopathic Skeletal Hyperostosis, reassessment at analysis stage has concluded the vertebral changes are degenerative age-related changes.

A series of bony spurs were observed on the humerus shaft from the same individual. This is possibly a consequence of deep muscle trauma, perhaps a twisting injury (Rogers *et al.* 1997). Eburnation, defined as a highly-polished area on a joint surface, was observed on the proximal humeral head, a symptom of osteoarthritis (Waldron 2009: 27). Assuming the cremated bone from cremation number 3 is all derived from one individual, the pathologies point to degeneration with age, associated with heavy labour and trauma.

The predominant colour range of the cremated human bone varied between cremation burial deposits. Such colour variation is indicative of different temperatures during cremation events. The cremated bones from deposits 1284, 3316 and 3328 were predominantly white in colour. This suggests that bone temperature during cremation was over 600°C. By contrast, cremated bones from deposits 3207, 3213 and 3240 were dark blue to white in colour. This could indicate that temperatures of around 600°C were reached, with some bones not reaching this temperature during cremation. According to McKinley a single cremation pyre maintained at around 700 to 900°C would produce a range of colours in the bone (McKinley 2008, 168). The cremated bones recovered from deposits (3208), (3214), (3331), (3332), (3335) and (3303) were mostly brown bone fragments, but also included a small amount of orange fragments. Some dark blue to black cremated bone fragments were also present, notably from within Vessel nos. 83, 85 and 89 (Cremation nos. 4, 3 and 1). These darker colours suggest bones were heated at lower temperatures, up to approximately 300°C.

The temperatures reached at different cremation events can vary. There can also be significant variations in temperature between different areas or zones within the same cremation. However, the predominance of darker coloured bone fragments for many of the cremation burials suggests that cremation at Lyde Green was generally carried out at relatively low temperatures, resulting in what might be considered to be 'incomplete' cremation. We know that an incomplete cremation was regarded as abhorrent and was regarded as an insult to the deceased, but it is not clear what the Romano-British population would have regarded as an incomplete cremation (McKinley 2008: 180). It is possible that individuals were considered to be sufficiently cremated in order for them to reach the afterlife, even though the bones were not white in colour (Noy 2005).

Non-cremated neonatal remains

A small assemblage consisting of 19 fragments of disarticulated neonatal human remains was recovered from context (3203), a demolition deposit associated with the bathhouse. No grave cut was evident, and the remains were retrieved by hand by archaeologists on the site. A summary of the post-excavation analysis of the remains is provided in Table 5.4 and the methods are described in Appendix 7.

The total weight of the assemblage was 26g. All fragments were in very good condition (grade 1, see Appendix 7). Several were complete with intact cortical bone surfaces. There was no duplication of elements. It is possible that the minimum number of individuals represented is at least two, however, based on bone length measurements (Table 5.5). The two age groups were estimated to be between 38–42 weeks (2 weeks – one month post-partum) and 29–33 weeks (*c.* 7–8 months, possibly perinatal (Scheuer, Black & Schaefer 2009; 264, 284 & 300). Due to the age-at-death, it was not possible to estimate sex for any fragments from the assemblage and no pathologies (metabolic, neoplastic or congenital), trauma or abnormalities were apparent.

The age assessment of the remains has various social and cultural implications. There are several potential causes for the death of the human neonates, including stillbirth, illness, complications during labour, early labour and miscarriage (Taylor 2003). With regard to the perinatal remains, miscarriage or stillbirth could be a more relevant cause of death (Lewis 2010: 405). Childbirth complications were a common occurrence in Roman Britain, frequently resulting in the death of the infant. Consequently, childbirth was a common cause of

Table 5.4 The Human Remains: quantification of neonatal bones

Context	Quantity	Weight (g)	Comments
3203	10	9	Cranial fragments
3203	4	12	Left femur & tibia, left & right fibula
3203	2	3	Right proximal femur and right tibia
3203	3	2	All right rib fragments

death for women; hardly surprising when there was a lack of both medical care and facilities (Hope 1999: 59).

Another cause of infant mortality in Roman society was infanticide, defined as the practice in some societies of the deliberate killing of unwanted children within the first year of birth (CUP Dictionary 2013 online). Research conducted by Mays (1993: Fig. 1) on neonatal remains from Romano-British sites has revealed that a large proportion of the neonatal remains were most likely victims of infanticide (Mays 2010: 204). In some societies male children were more desired than female children and when infanticide was practised, often more female babies were killed than males (Scrimshaw 1984).

Naturally it is not possible to determine whether the two neonatal individuals died as a result of infanticide, or to ascertain the gender of the remains. The location of the remains within a layer associated with the demolition of the bathhouse indicates that the neonate burials may have been originally associated with the Roman bathhouse and were disturbed during later robbing of the stone foundations of the building.

5.9. Archaeobotany

By Don O'Meara and Lynne Gardiner

The sampling strategy for all the Lyde Green excavations saw 671 bulk environmental processed, totalling *c.* 9700 litres of sediment. All of the processing of environmental soil samples was carried out at Wardell Armstrong's Carlisle premises using washover/ flot retention meshes of 300 microns and residue retention meshes of 1mm. Siraf method of flotation was used (Williams 1973) and the full methodology can be observed in the Environmental Archaeology section of the post-excavation assessment report written by O'Meara (McElligott 2014b: 91-95). The discussion presented here follows recommendations made during the post-excavation assessments.

Just over 55% of all samples came from ditches and gullies, with *c.* 20% from pits, 12% from postholes and 7.5% from deposits associated with structures. The remainder came from funerary contexts and tree-throws.

A notable characterisation of the assemblage was the number of samples that produced sparse, or no remans. Of the total assemblage just under 30% (182 samples) produced charred cereal remains. Of these 182 samples, 144 produced fewer than 10 individual fragments of grain or chaff. At the opposite end of the scale 14 samples produced more than 100 fragments of grains or chaff fragments.

A subset of the overall assemblage can be observed in Table 5.7.

Table 5.5 Quantification of human skeletal elements from deposit (3203)

Side	Element	Pres.	Complet. (%)	Length (mm)	Age (weeks)	Epip.
L	Femur	good	100	80.40	38 - 42	No (postnatal)
L	Tibia	good	100	66.32	37 - 41	No (postnatal)
L	Fibula	good	100	71.34	37 - 42	No (postnatal)
R	Fibula	moderate	85	-	37 - 42	-
R	Femur	good	40	-	29 - 33	No (prenatal)
R	Tibia	good	100	47.72	29 - 33	No (prenatal)
L	Rib 2/3	good	80	-	-	-
-	Rib 4/5	good	30	-	-	-
-	Rib 7/8	good	90	-	-	-
-	Cranium	good	40	-	37 - 42	No (postnatal)

Table 5.6 Age estimates using regression equations from Scheuer et al. (1980) (In. Scheuer & Black 2000, 394 & 415)

Element	Equation	Fem. length range (mm)	Mean age (weeks)
L Femur	(0.3303 x Femur Length) + 13.5583 +/- 2.08	38.03 – 42.19	40.11 (postnatal)
L Tibia	(0.4207 x Tibia Length) + 11.4724 +/- 2.12	37.25 - 41.49	39.37 (postnatal)
R Tibia	(0.4207 x Tibia Length) + 11.4724 +/- 2.12	29.42 - 33.66	31.54 (prenatal)

Table 5.7 Selected archaeobotanical data

Feature type	Cut	Fill	Sample no.	Results
Ditch	1005	Various	1, 2, 4, 74	Large number of oat grains, spelt glume bases and indeterminate grain. Oat grains, as well as 100+ spelt glumes, 100+ indeterminate cereal grin types, charred broom and small grass species caryopsis
Ditch	1038/1005	1039/1009	87	*c.* 120+ spelt glume bases, broom, and smaller grass caryopsis.70 grains and chaff; both spelt and indet.
Ditch	1038	1039	8	*c.* 150 spelt glume bases
Ditch	1045	1052/1053 /1177	15, 16, 34	*c.* 160 spelt glume bases, and indeterminate typesindet. cereal grain
Ditch	1045	1053	16	*c.* 50 spelt glume bases, indet. cereal grain
Ditch	1045	1177	34	*c.* 60 spelt glume bases, indet. cereal grains, broom and smaller grass caryopsis
Ditch	1080	1109/1110	24, 25	500 spelt glume bases, indet. cereal grain, wheat-type grain, single f. barley rachis
Ditch	3022	3023	89	*c.* 500 spelt glume bases, *c.* 500 spelt caryopsis, frequent grass caryopsis
Ditch	3171	3168	127	*c.* 1000 spelt glume bases, *c.* 800 spelt grains
Ditch	3029	3031	91	*c.* 100 spelt glume bases
Ditch	3029	3125	107	
Ditch	3029	3127	108	
Ditch	3901	3904	390	*c.* 50 spelt glume bases
Ditch	3772	3773	443	65 spelt glume bases, 20 indeterminate/ spelt grains
Ditch	3770	3771	444	*c.* 45 spelt glume bases, *c.* 55 indeterminate/ spelt grains
Ditch	3767	3768	434	*c.* 80 spelt glume bases, 60. Indeterminate, wheat-type grain
Ditch	3163	3159	123	*c.* 100 spelt glume bases, *c.* 40 indet. grains
Ditch	3163	3161	124	
Posthole	4082	4083	429	73 indet. cereal grains
Linear	3792	3791	339	*c.* 150 spelt glume bases, *c.* 20 indet. cereal grains
Linear	4106	4107	433	*c.* 100 spelt glume bases, 1000+ indet. cereal grains

Conclusions

A significant part of these conclusions must take into account taphonomic issues, which affect both the preservation and recovery of charred plant remains from clay soils.

The clay nature of the soil was a significant factor in the time it took to process the samples recovered. The process of disaggregating a clay soil sample via the flotation system must be seen as a significant, intense, point of physical and chemical degradation. In addition to this, when processing clay sediments it must be considered that the infiltration of clay into the pores and voids of charred material is a significant factor in the inability of this material to float. This can be compounded by the development of mineralisation in the voids of charred material, particularly in soils that are persistently anoxic or prone to waterlogging.

In the case of clay soils where there have been phases of wetting and drying this can be another focus for long term physical degradation; in this case physical weathering caused by expansion and contraction of the clay. It is of note that the majority of the relatively richer samples were derived from primary ditch fills. Material from contexts such as these is likely to have been subjected to subaerial weathering, more so than remains that might have been incorporated into shallower deposits such as layers, spreads, and post-holes.

In addition to preservation, recovery must also be considered as an important factor. For the material from Lyde Green in all cases where more than 100 cereal elements were recovered, and in the majority of cases where 10-100 items were recovered, the archaeobotanical material was mainly recovered from the heavy residue, and not the initial flot. This was accomplished by placing the dried and sorted heavy residue material into a bucket of water and decanting off the resultant floating charred material. This charred and desiccated plant material was derived from material that did not float during the initial processing in the flot-tank.

Most of the charred plant remains observed throughout the assemblage were spelt glume bases, with much of the caryopsis/grains not being sufficiently well preserved to allow an identification beyond being an indeterminate cereal, or at best a wheat-type cereal grain. For discussion here it is assumed that the indeterminate grain was also from spelt wheat. Grains of barley, oats, and rye were all notably absent; limited to infrequent, typically single occurrences.

In terms of charred wild plant remains associated with the cereal assemblages this was limited to small grass species grains/caryopsis, broom (*Bromus* sp.), and occasional charred docks (*Rumex* sp.). In a number of cases, as in the case of ditch fill (1080), the presence of several hundred grass caryopsis, and *c.* 100 seeds of broom grass strongly suggests an association between these plants as weeds of spelt wheat cultivation. In all other cases wild plants were represented by occasional desiccated forms, with no evidence of imported or exotic material (such as exotic food stuffs). Rare examples of charred hazelnut shell provide the only other evidence of wild plant exploitation. A key issue here must be the nature of preservation, as the absence of waterlogged deposits or latrine waste material meant the preservation conditions that would normally preserve this type of material through the archaeological record were not present here.

The presence of charred cereal grains on archaeological sites is first and foremost linked to the need to dry the cereal either when harvested before storage (particularly in the British climate), or when removed from storage before threshing into grains before use (primarily milling into flour or malting). Spelt is a glume wheat, meaning the husks are tightly bound to the grain, a feature which means they are often stored in a semi-processed state; with the weeds and straw removed, but the grain still on the ear, or possibly as loose spikelets. This helps to protect from pests and moulds, but also means the grain must be thoroughly dried before the grain can be freed from the chaff. It is this latter stage which seems to predominate at Lyde Green: the material from separated glumes and grain. The relative absence of weed seeds, the almost total absence of rachis, and the presence of assemblages dominated by glume bases, all point to the processing of stored, semi-processed grain, and not early post-harvest material.

Although the charred glume bases may be indicative of an accident that occurred during the processing procedure (e.g. a fire in the corn-dryer), they may also be the result of the waste from the processing being used as fuel (cf. Campbell 2017: 135). The predominance of glume bases from the assemblage here suggest the burning of threshing waste is likely to be the main contributing factor to the recovery of material.

Holbrook (2003: 108) stated some time ago that Roman period plant remains were scarce in this area, apart from Birdlip Quarry, where the archaeobotanical assemblage was dominated by spelt. He cites Pelling (1999: 479-490), who emphasised the fact that Roman period cereal assemblages in southern England are dominated by spelt. She reiterated this again some years later (Pelling 2005: 53), as well as stating that the use of spelt is a continuation from the Iron Age. This can be observed in the assemblage from the Lyde Green excavations.

5.10. Zooarchaeology

The total weight of the assemblage was 16.75kg. The ten largest volumes represent just over 7kg of bone. The smallest 150 assemblages were represented by *c.* six kilograms of bone and were dominated by small fragments of bone and occasional loose molars of domestic mammals. Of all 172 contexts which produced animal bone, 75 contained only loose teeth or enamel fragments. This included fragments mainly from cattle and sheep, but with some pig and horse teeth, as well as two contexts with dog teeth.

The largest assemblage (1.2kg) came from an L-shaped section of ditch, north of Structure {4226}. This was dominated by denser elements including a cattle horn-core fragment, loose molars, and cattle proximal phalanges. Other notable concentrations of bone included a pig skeleton from curvilinear ditch [1038], a deposit which also produced a small concentration of spelt wheat. Demolition layers from within the villa produced 1.3kg of animal bone, mainly cattle bones from juvenile animals (with unfused epiphyses), as well as a fragmentary dog skull.

Two fragments of worked bone were identified. These were a medieval bone knife handle from pit fill (3935), which contains 12th-13th century pottery fragments; and a fragment of worked deer antler from levelling surface (4237), which was a stone layer associated with 2nd – 4th century Roman pottery.

Although some of the bone was well preserved, approximately 40% of the bone could be described as being poorly preserved: the bone showed significant flaking of the bone surface, the edges were abraded, and the bone was friable when handled. Little evidence of root etching was identified, while dog gnawing was commonly identified. It should perhaps be considered that dogs played an important part in the degradation of the bone through gnawing and may have played a part in distributing bones across the site during the Roman period.

Pathological evidence was recorded from many of the cattle proximal- and inter-phalanges, where moderately

developed degenerative joint disease was noted on the caudal aspect of these bones. A possible early stage of spavin was identified on a cattle metatarsal from (3234).

Little evidence of butchery was noted on the material examined. This is likely to be a result of the moderate to poor preservation of much of the assemblage, with delicate cutmarks obscured by poor preservation of the bone surface.

Overall, the elements recovered appear to show a bias towards the denser elements of the skeleton. Fragments of cattle glenoid fossa (8 recovered), fragments of acetabulum (4 recovered), and numerous loose molars were the most commonly recovered elements. These results mirror those from other villa sites in the region, in particular the material from Turkdean Roman site (Sidell 2004). At Turkdean it was the opinion of the analyst that the low frequency of remains was likely to be because the rubbish disposal part of the site had not been uncovered. However, it should also be considered that the effects of the acidic soil are likely to have considerably reduced the bone assemblages from this region, unless they are in particularly large deposits, contexts where they are protected from weathering, or in waterlogged contexts. The volume collected here was smaller and in poorer condition than that collected from Groundwell Ridge Villa, Swindon (Hammon 2006).

5.11. Discussion

The Roman villa complex at Lyde Green was previously unknown. It occupied a central position on top of a small ridge that had a good view east towards the Cotswolds. It was placed near a spring line, one of several were discovered and flowed constantly during the excavation. The villa developed within what was an already well-managed and productive landscape. It could be objected that as the evidence recorded at Lyde Green came from six separate excavations, spread over quite a wide area, there is no certainty that the data recorded all relates to the same Romano-British farmstead or estate. The pre-excavation evaluations, however, demonstrated that the Romano-British focus of activity was along a low ridge and on the downslope to the east. As the activity is so clearly concentrated in one place it seems reasonable to assume that the evidence for Romano-British settlement and immediate settlement-area land use is all related and that it was all within the confines of a single estate.

Following the likely occupation of a D-shaped enclosure during the 1st century AD within Area D, the focus of the estate that became associated with the Lyde Green villa seems to have moved to a building close to the D-shaped enclosure by the 2nd century. This building was not in the native tradition but rectangular, multi-celled and probably had two stories. Nevertheless, it was not a sophisticated structure. It possessed no more than three separate cells on the ground floor, no evidence of a heating system, a bathroom suite, or painted wall plaster. It seems to have been half-timbered and thatched. At nearby Stoke Gifford a slightly larger rectangular building than the structure in Area D, with a footprint of 19m by 7m rather than 14m by 5.5m, formed the core of the later 3rd to 4th century villa (Bristol and Avon Archaeological Society 2017). At Lyde Green the initial three-celled building was replaced by a villa in a different location, but otherwise the development sequence seems similar to Stoke Gifford: a Roman-style building forming a farmhouse and later being upgraded to a villa.

Contemporary with the occupation of this structure, activity within Area B had increased. A large, apparently single celled, half-timbered and probably thatched structure {4226} may have been either domestic in function or agricultural. Its size and lack of internal partitions are perhaps most suggestive of a barn. It was broadly contemporary with a well, grain drying kiln and a series of cremations recorded within the same excavation area. There is the possibility that iron smelting was carried out to the north of the area.

During the 2nd to 3rd centuries in Area C an iron smithing enterprise was established as evidenced by debris and a smithing hearth. This was associated with a likely working area, possibly for finishing iron items, and a well. The evidence of iron working from Areas B and C is tantalising but difficult to place within a coherent framework. There is a clear spatial distinction evident in the distribution of iron working material, with smithing material being concentrated in Area C and smelting slag in Area B. Whilst the smithing waste is clearly locatable to Area C phase 6 and thus datable to the 2nd to 3rd centuries, the smelting slag comes mainly from late fills of Area B phase 4 spreads, pits and ditches and thus was deposited at least at the end of the villa's life in the late 4th or possibly early 5th centuries AD. The greatest quantity of tap slag, beside that from pit [6187], came from post-building abandonment and decay layers. This is almost certainly tertiary deposition from waste material collected in slag heaps. These slag heaps may have existed during Area B phase 4 but when they were created cannot be deduced. It is possible that their initial deposition, following production, took place in Area B phase 3, making them contemporary with the Area C smithing deposits. Within the compound the smelting slag is distributed around the latrines and the bathhouse, including from the foundation trench of a Post-medieval wall that cut through the bathhouse. Some occurs in a pit dug after the main villa building was demolished. The most significant dump of material contained three furnace bases. These were deposited,

along with tap slag, smelting slag and furnace linings, in a large pit [6187] which lay to the north-west of the main villa compound. It is undatable and not possible to phase stratigraphically. As the underlying clay of the pit was unburnt it seems as if the pit was used as a dump for ironworking waste that was generated nearby. It is most likely that the site of the Romano-British iron smelting at Lyde Green lay outside, but close to, the north-western corner of Site B and unsurprisingly outside the villa compound. Ironworking slag was taken into the compound at an unknown date and found its way into late phase 4 fills. The date of this Romano-British smelting activity remains unknown, it is possible that it was contemporary with the smithing activity in Area C, that is before the villa was constructed, but equally it is possible that it was undertaken during the villa's occupation.

The certainty that there was a smithing industry in Area C in the 2nd to 3rd centuries and the possibility that this was linked to a contemporary smelting operation in or near Area B, suggests that the necessary wealth to invest in the development of the late 3rd to 4th century villa complex may have been generated through ironworking. Investment was considerable and in the late 3rd century a tripartite corridor villa, a detached bathhouse, another large rectangular and probably agricultural building and a possible latrine block were erected within what appears to be an enclosed site, with possibly inner and outer wards. In the outer ward in front of the main entrance into the villa complex a new grain drying kiln was built to replace the one demolished for the building of the tripartite corridor villa.

The villa complex was certainly an upgrade in the standard of accommodation over what had gone before. The main building had more rooms and a stone tiled roof. Painted wall plaster was found, indicating that some of the rooms were decorated. The complex included a probable latrine block and a detached bathhouse with painted wall plaster and at least one heated room. The move of the accommodation from the base of the ridge to the top of the ridge may be indicative of prominence being considered a more important aspect of the domestic accommodation rather than shelter from the prevailing weather. Certainly, display seems to be a factor in the organisation of space during the lifespan of the villa complex.

5.12. The abandonment of the villa estate

Whether or not the settlement lasted much into the 5th century is a difficult question to answer definitively. The coin assemblage for the 3rd and 4th century AD is much richer than for the preceding or subsequent centuries. Much of the coin assemblage is unstratified, with the earliest datable coin from a stratified deposit belonging to the late 3rd century AD. The latest identifiable Romano-British coin recovered dates to AD 385-395. Although it is one of only two late 4th-century coins, its presence implies a degree of continued activity in the last decades of the 4th century AD. The ceramics also indicate occupation in the second half of the 4th century, although the scarcity of certain forms indicates that it was perhaps on a restricted scale (Section 6.2).

The villa complex therefore remained in use from the late 3rd century through to the late 4th century, and quite possibly into the early 5th century. When it went out of use, it seems for the most part to have been deliberately demolished. This act seems to have brought to an end an intensive and long-lived period of occupation on the site concentrated in and around the low ridge occupied until recently by Hallen Farm. The area does not seem to have been targeted for resettlement until the 12th century, at which time the main activity being carried out may have been stone robbing (see Chapter 7).

Chapter 6

The Romano-British artefacts (mid-1st century AD to 5th century AD)

This chapter presents specialist reports on the Romano-British artefacts recovered from the Lyde Green excavations. With the exception of the evidence for iron smelting, each of these is fairly typical for a rural site of this nature and date. In the first section Robert Young discusses the assemblage of handmade pottery which, while following the traditions of the Middle to Late Iron Age, may well have been produced and deposited during the 1st and 2nd century AD. The following section, written by a number of Roman pottery specialists coordinated by Ed McSloy, analyses transitional wares and many more closely datable forms of pottery which came into use during the Romano-British period. Analysis of the small assemblage of ceramic building material conducted by Philip Mills follows, and has interesting conclusions related to the bathhouse. The small finds, the majority of which were analysed by Richard Henry, are presented next. The chapter concludes with a summary of Gerry McDonnell's scientific analysis of the archaeometallurgical evidence.

6.1. Locally produced handmade pottery in the Middle to Late Iron Age tradition

By Robert Young

The assemblage

A total of 188 sherds of pottery, weighing 1.12kg, and representing 30 vessels, was recorded from 13 archaeological contexts (Figure 6.1). All vessels are potentially of Middle to Late Iron Age date, although in this region of Britain local traditions of ceramic production appear to have continued beyond the Roman conquest. Table 6.1 below, shows the distribution of recorded ceramic forms by area and context.

As Table 6.1 indicates, most of the identifiable vessels present are jar types (but see discussion below) and within this category it has been possible to identify 12 globular jars (40% of recorded vessel types) and 12 straight sided or barrel type jars (40% of recorded vessel types).

Table 6.2 below, indicates the nature of construction and finishing techniques apparent in the assemblage:

All vessels were hand-built and eight examples (27% total vessels) show some external surface modification/ wiping. Four vessels have a soapy feel to the fabric (Nos. 9, 14, 26 and 29).

Table 6.1 Handmade pottery in the Iron Age tradition: Distribution of ceramic forms by area and context

Area	Context	Vessel	Form	Residue
B	U/S	1	Jar	n
B	U/S	2	Jar	n
B	1000	3	-	n
C	2007	4	-	n
C	2014	5	-	n
C	2042	6	Barrel shaped Jar	y - Int. and ext. surfaces
C	2072	7	-	n
C	2172	8	Jar	n
C	2244	9	Jar	n
C	2244	10	Jar	n
C	2244	11	Globular Jar	n
C	2244	12	Globular Jar	n
C	2244	13	Globular Jar with perforated lugs	n
C	2257	14	Globular Jar?	n
C	2326	15	Thick walled Globular Jar	n
C	2342	16	Small Globular Jar	n
C	2342	17	Globular Jar	y - Ext. surface
C	2342	18	Globular Jar	n
C	2342	19	Globular Jar	n
C	2397	20	Globular Jar	n
B	3231	21	Globular Jar?	n
B	4027	22	Thick Rimmed Globular Jar	n
D Tr.1	122	23	-	n
D Tr.1	122	24	-	n
D Tr.1	122	25	Jar	n
D Tr.1	122	26	Jar with Elongated Neck	n
D Tr.1	122	27	Jar	n
D Tr.1	122	28	Thin-walled ? Jar	n
D Tr.1	122	29	Jar	n
D Tr.1	122	30	Fine-walled ? Jar	n

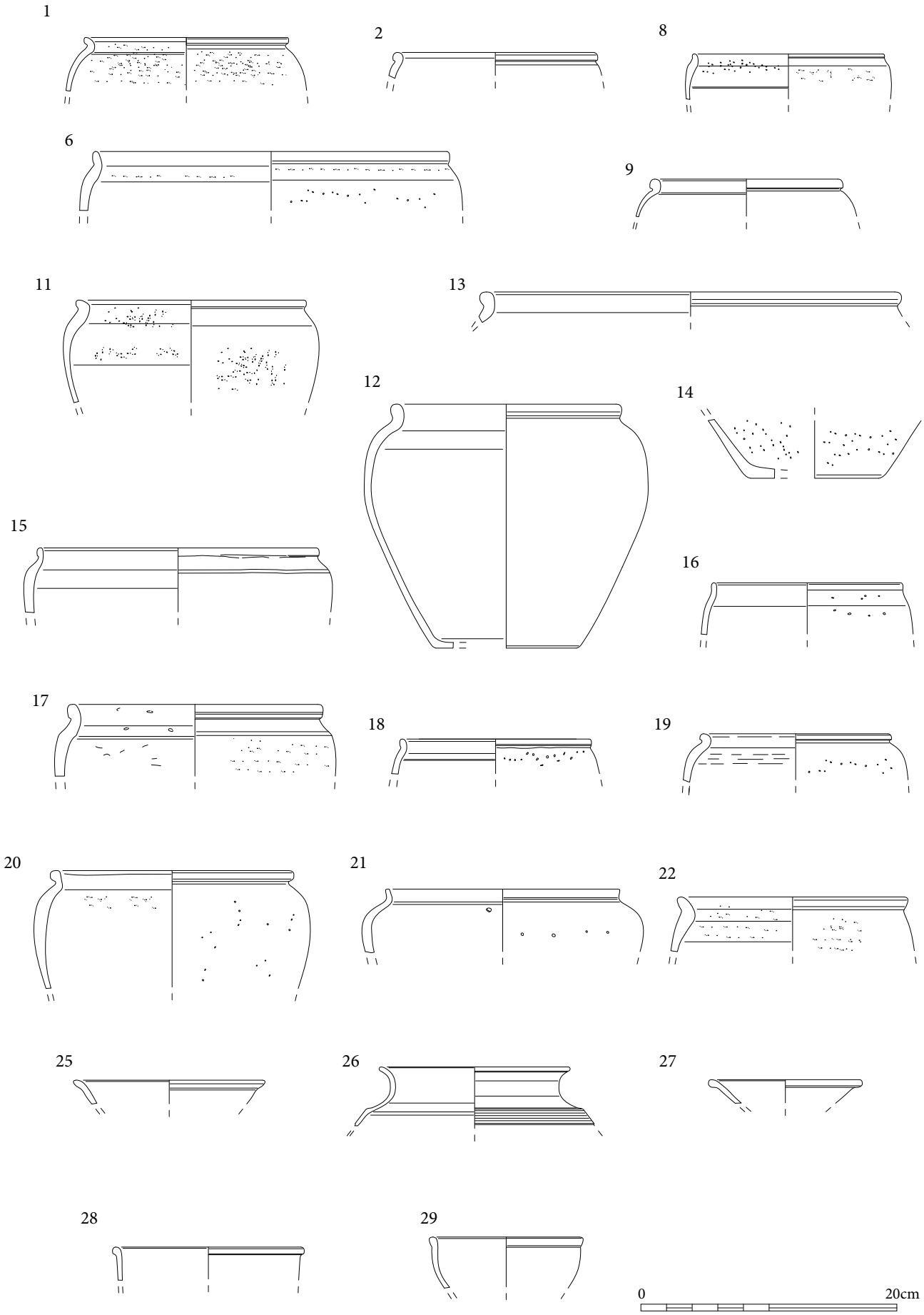


Figure 6.1 Profile illustrations of the handmade ceramics produced in the Iron Age tradition

Table 6.2 Handmade pottery in the Iron Age tradition: technology and surface finishing

Vessel no.	Wheel thrown/ wheel finished	Wiped on external surface	Wiped on internal surface	Wiped on both surfaces	Hand built
1	-	✓	-	-	✓
2	-	-	-	-	✓
3	-	-	-	-	✓
4	-	-	-	-	✓
5	-	✓	-	-	✓
6	-	-	-	-	✓
7	-	-	-	-	✓
8	-	-	-	-	✓
9	-	-	-	-	✓
10	-	-	-	-	✓
11	-	-	-	-	✓
12	-	✓	-	-	✓
13	-	-	-	-	✓
14	-	-	-	-	✓
15	-	✓	-	-	✓
16	-	-	-	-	✓
17	-	✓	-	-	✓
18	-	-	-	-	✓
19	-	✓	-	-	✓
20	-	✓	-	-	✓
21	-	-	-	-	✓
22	-	✓	-	-	✓
23	-	-	-	-	✓
24	-	-	-	-	✓
25	-	-	-	-	✓
26	--	-	-	-	✓
27	-	-	-	-	✓
28	-	-	-	-	✓
29	-	-	-	-	✓
30	-	-	-	-	✓
TOTAL	**-**	**8**	**-**	-	30

Eighteen of the vessels recorded are in totally reduced fabrics (60% of total finds) (Nos. 1, 2, 5, 6, 8, 9, 14, 15, 16, 17, 18, 20, 21, 22, 23, 25, 26, 30). Six examples (Nos. 3, 4, 13, 24, 27, 29) exhibit oxidised internal and external surfaces with reduced black/grey cores (20% of total finds). Six others (Nos. 7, 10, 11, 12, 19, 28) also exhibit reduced external surfaces, oxidised internal surfaces and reduced cores (20% of total finds).

None of the vessels exhibit obvious decorative traits, but Vessel 24 retains a narrow, raised cordon which appears to run around the circumference of the vessel and Vessel 26, a jar form with a flaring neck, exhibits a marked ridge running around the vessel circumference just below the emergence of the neck.

Fabric types

All sherds were examined under a X10 hand lens in natural light. Nine fabric types were identified.

Rim forms and diameters

Eight rim forms were identified, and these can be classified as follows.

It was possible to measure the rim diameters of 14 vessels.

As Table 6.5 shows, diameters range from 12cm – 33cm with a mean diameter of 17.4cm. Eight vessels (over 57% of the measured sample) have diameters of 15cm and the emphasis seems to have been on small jar forms, some of which may have served as cooking pots.

Abrasion and fragmentation

Abrasion is one of the few measurable indicators of the use of pottery between the breakage of a pot, and the deposition of the sherds. As Miket *et al.* (2008: 31) have argued, it relates to the interval between the original use of a pot and its archaeological recovery. The methodology developed by Sørensen (1996) to assess ceramic abrasion has been applied here to examine the Lyde Green ceramic sample. Using this approach, it is suggested that the vessels generally exhibit 'low abrasion' which can be defined as follows — 'edges maintain sharpness, but markedly extruding edges and temper are worn, the core colour is generally still fresh but texture is slightly smoother'. This might suggest that all sherds were treated in the same way after breakage.

Residues

Three vessels retain carbonised residues on either one or both surfaces. Vessels 6 and 20 have hard brown concretions on both inner and outer surfaces, while Vessel 17 exhibits hard black concretions on its external surface. This would suggest their use in the cooking process, with external residues possibly indicating food

Table 6.3 Handmade pottery in the Iron Age tradition: fabric types

No.	Fabric description	Vessel number	Total
1.	Vesicular fabric with rounded quartz particles and quartz sand grains	1, 2, 3, 4, 5, 9, 10, 23	8
2.	Vesicular sandy fabric, slightly laminar structure internally, with rare rounded quartz particles, and some quartz sand and rare, light grey, soft? limestone fragments.	6, 13, 14, 20, 25, 28, 30	7
3.	Vesicular fabric, laminar internal structure. Small hard grey angular stone fragments present, some soft grey inclusions, rounded quartz particles and quartz sand. Small, white calcite/ shell inclusions also visible.	7	1
4.	Vesicular, sandy, fabric. Black/dark brown interior and exterior surfaces. Black reduced core. Rare quartz grains and rare grey inclusions with some shiny black rounded grits also present.	8, 11,12, 15, 16, 17, 22, 27	8
5.	Vesicular fabric with rare, hard, red inclusions and some quartz particles present. Small, shiny, rounded black grits and grey inclusions also visible.	18, 29	2
6.	Vesicular fabric with white? calcite inclusions, some black grits and hard angular grey inclusions also present.	19	1
7.	Vesicular fabric with small angular grey inclusions, rare red/ brown particles and some quartz particles and sand grains.	21	1
8.	Very sandy fabric, fine orange oxidised inner and outer surfaces and light grey core. Quartz sand grains and small, angular sandstone inclusions also visible.	24	1
9.	Fine sandy fabric with a slightly soapy feel. Grey core with grey/brown internal and external surfaces. Some soft grey inclusions also visible.	26	1
Total			**30**

Table 6.4 Handmade pottery in the Iron Age tradition: rim forms

Rim Type	Rim description	Vessel no.	Total
1	Small, rolled over rim with internal rim bevel	1, 28	2
2	Rounded, beaded rim	2, 8	2
3	Small, rolled over, slightly out turned with rounded top	6, 9, 11, 19	4
4	Upright, rounded	10, 16, 21, 25, 29, 27	6
5	Thick, rounded, slightly out-turned	12, 13, 20, 22	4
6	Upright, rounded, slightly beaded	15, 18	2
7	Heavy, rounded, slightly beaded with marked shoulder	17	1
8	Flaring neck, rounded rim	26	1
Total		22	22

remains from meals, which had boiled over onto the outside of the vessel, and internal residues indicating food that had burned onto the vessel surface and was not cleaned off.

General discussion and vessel parallels

Professor Tom Moore of Durham University is currently working on the oppidum site of Bagendon (Gloucs.) and he has suggested that the material from Lyde Green would fit into a Middle to Late Iron Age date range, probably beginning around the 3rd century BC and running on into the late 1st century BC. This chimes well with material from a range of sites in the region.

The finding of exact parallels for the material from Lyde Green is not without its difficulties. This is primarily because, as Cunliffe (2005: 82) has pointed out, 'In Somerset the essentially Middle Iron Age traditions appear to have continued little changed until the Roman Conquest, while in Gloucestershire, Herefordshire, Shropshire and South Wales the local styles may have continued in use even later until these areas were gradually subsumed by the Roman army between AD 47 and *c.* AD 60.'

Table 6.5 Handmade pottery in the Iron Age tradition: rim diameters

Vessel no.	Rim diameter (cm)
6	25
8	15
9	15
13	33
15	22
16	12
17	20
18	15
19	15
25	15
26	15
27	12
28	15
29	15

In 1957, Philip Rahtz carried out excavations at Blaise Castle Hill, Bristol. Iron Age, Roman and medieval occupation was recorded and several hundred sherds of decorated and undecorated Iron Age pottery were identified (Rahtz and Brown 1957: 152). This pottery was reported on by Arthur ApSimon (1957). He identified it as 'Iron Age B ware' and drew parallels for the decorated pottery with material from Glastonbury. Amongst the undecorated vessels, rim forms and overall vessel sizes appear to be similar to the material from Lyde Green (ApSimon 1957: 162, Fig. 37, Nos. 18-37). Lugged vessels, similar to Vessel 13 below, were also recorded (ApSimon 1957: 162, Fig. 37, Nos 8 and 18).

Wedlake identified a range of vessels of similar form to that from Lyde Green, from Camerton in Somerset. These, he believed, spanned the 3rd-2nd centuries BC to the end of the 4th century AD (Wedlake 1958: 110). This material came from a series of Iron Age ditches (Wedlake 1958: 114, Fig. 30 & 117, Fig. 31).

Stokeleigh Camp is one of three Iron Age enclosures identified in the Avon Gorge. This site was subject to small-scale excavation by J.W. Haldane in the late 1960s (Haldane, 1975, 29-63). The work produced some 750 sherds of pottery, including undecorated material similar to the Lyde Green sample. This came mainly from an area of pits and post holes behind the rampart (Area D) (see Haldane, 1975, 46, Fig. 16, P 512, P566, P567, P578, P795, P 812a, P826; 48, Fig. 17, P812c, P812d, P641, P400). A perforated lugged handle, similar to that recorded on Vessel 13 at Lyde Green was also recovered (Haldane 1975: 48, Fig. 17, P 957).

In 1978 A.J. Marshall reviewed 'Material from Iron Age Sites in the Northern Cotswolds' (1978: 17-26) and in this he cited a range of pottery forms from the hill fort site of The Knolls which parallel the material from Lyde Green in both rim and body form (Marshall 1978: 21, Fig. 3 Nos. 1, 2, and 4-10).

John Coles' re-interpretation of the work of Bulleid and Grey at the lake villages of Meare East and West showed that only 5-10% of the ceramic material recovered was decorated and that most of the material was very similar in terms of overall form to that from Lyde Green. The Meare material was associated with radiocarbon dates that suggested an initial period of occupation commencing in the 3rd century BC (Coles 1987: 246-249).

Twelve years later Charles Parry published the results of excavations at Gilders Paddock, Bishops Cleeve, Gloucestershire (Parry, 1999, 898-118). A detailed pottery report by Annette Hancocks (1999: 104-109) highlights the fact that the majority of Iron Age sherds present represented a range of globular and barrel shaped jars that she thought were of Middle Iron Age date. Again, these provide very close parallels for the majority of the vessel forms at Lyde Green (Parry 1999: 106, Fig. 7, Nos. 3-5, 9-12 and 14-17; 107, Fig. 8, Nos. 21-23, 25, 26, 28, 31-32; 108, Fig. 9).

Most recently work as far afield as Allcourt Farm, Little London, near Lechlade (Stansbie *et al.* 2013: 25-93) and Churchdown Hill, near Gloucester (Burgess *et al.* 2016) have identified middle and later Iron Age material comparable to the assemblage under analysis here. Timby's pottery reports within these two publications are detailed and instructive (Timby 2013; 2016) and point out the difficulties in distinguishing between Middle Iron Age bowl and jar forms. She does however identify a range of ceramic types, mainly barrel or ovoid jars with what she terms 'undifferentiated' rims that would not be out of place at Lyde Green (Timby 2013: 48-49; 2016: 61, Fig. 12, No. 18).

The preceding discussion affirms Cunliffe's observations; namely that local styles of ceramics may have continued in use in areas of the south-west from the Middle Iron Age until the 1st century AD, when these areas were gradually subsumed by the Roman army. This assemblage thus has little power to convincingly extend the dating of the settled occupation at Lyde Green much earlier than the 1st century AD.

6.2. Roman pottery

By E. R. McSloy, with contributions from G. Monteil, D. Williams and I. Wood

The Roman pottery assemblage analysed here relates to four of the excavation areas at Lyde Green (A, B, C and D). It contains 14,805 sherds, weighing 180.3kg (186.27 EVEs). The assemblage relates to 646 stratified deposits, with 1178 sherds being recovered from unstratified levels. Most of the pottery within the assemblage was recovered through hand excavation. A small proportion of the assemblage, 1.5% by sherd count (215 sherds, weighing 569g), was recovered through the processing of bulk soil samples.

The assemblage was examined by context, sorted by fabric and quantified according to sherd count, weight and rim EVEs (estimated vessel equivalents: measured as the surviving rim percentage). Vessel form, by which is meant generic form, class, profile and rim morphology, was also recorded, as was evidence for vessel use (visible residues) and post-firing adaptation. A catalogue of the illustrations is included as Appendix 8.

Identification of the decorated Samian ware and stamps was undertaken by G. Monteil and a full catalogue can be found in Appendix 3.

A limited programme of thin-section analysis (11 samples) has been undertaken and the results presented in Appendix 4. The principle aim of this analysis was to characterise the common micaceous greyware fabric, and further to determine if samples from deposits dated to the 2nd to early 3rd century, and the later 3rd to 4th century, form a homogeneous group. A secondary aim was to compare other, non-micaceous greywares from deposits dated to the later 3rd and 4th century with samples from the regionally important kilns excavated at Venus Street, Congresbury, to the south of Bristol.

Condition and provenance

The condition of the assemblage was mixed. The preservation of the internal and external surfaces varied, being affected by numerous factors including microenvironment and the resilience of the individual fabrics. Surface preservation was particularly poor on the Severn Valley ware and slipped and colour-coated finewares, resulting in significant loss in some instances. The same environmental factors were likely also resultant in the loss of mineral (calcareous) inclusions among some types (fabrics LI and ROB SH). Some abrasion was noted especially among the unstratified elements. In the main, however, the assemblage appeared unabraded. The mean sherd weight for the assemblage, 12.1g, is moderately high for a Roman group and not suggestive of significant disturbance.

A little more than 30 deposits produced large context groups, over 100 sherds (to a maximum of 349 sherds). Very few of these large context groups came from pits, with the majority being derived from ditch fills and layers.



Plate 6.1 Cremation no. 5 with urn in situ, looking west

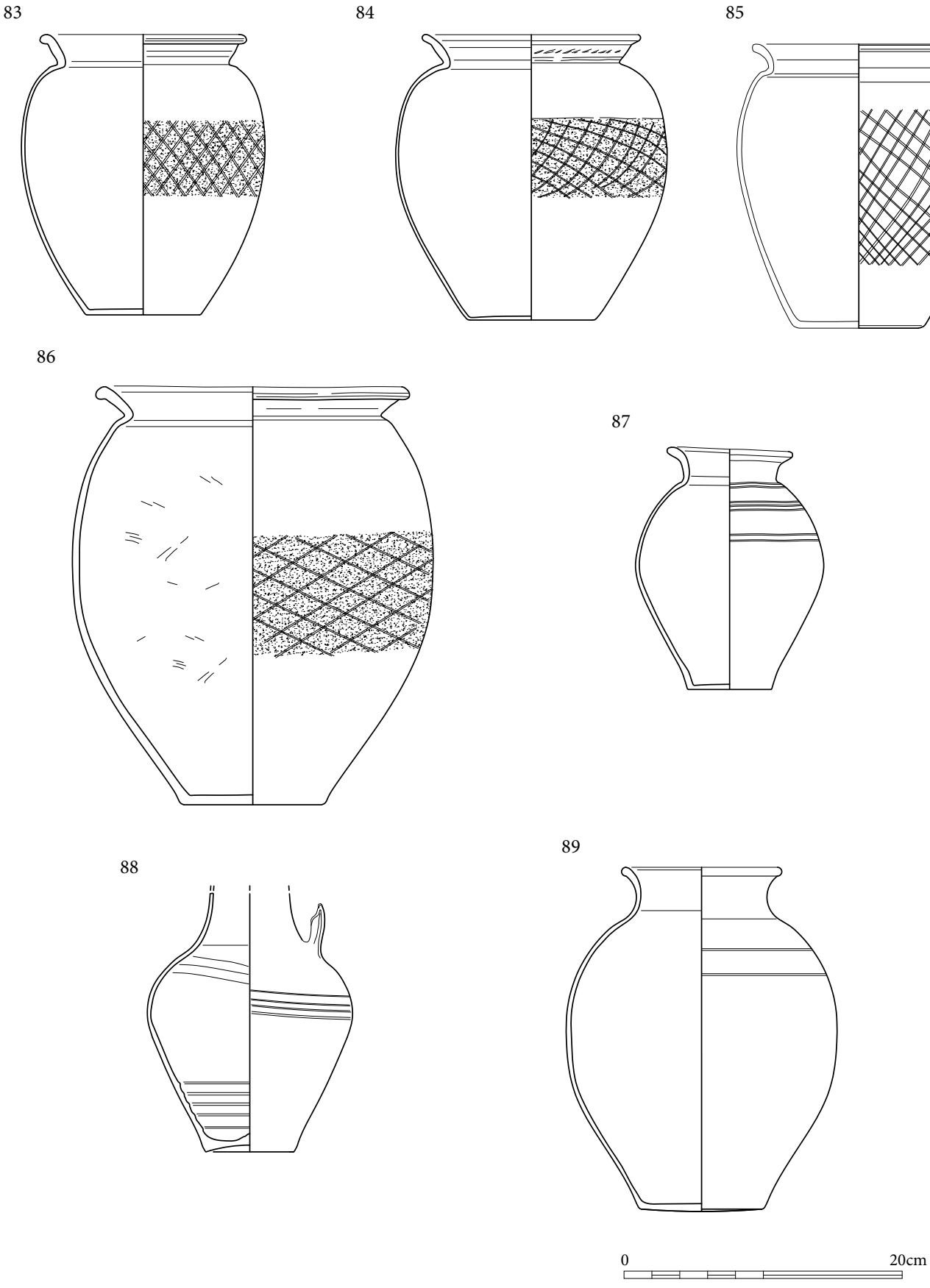


Figure 6.2 Illustration of six cremation urns and one accessory vessel (no. 88)

There are some complete or substantially complete vessels present in the assemblage. Most of the complete or reconstructed vessels (a selection is illustrated in Figure 6.2, nos. 83-89) were recovered from cremation burials, with these vessels functioning as urns or accessories (Plate 6.1). A few other substantially complete vessels, such as a flagon (SF 9) from spread (2452) and two Samian bowls (forms 31r and 38) from ditch fill (3848), might represent disposal of already broken vessels. The possibility exists that these may have been part of 'structured' deposits, perhaps relating to acts of foundation or closure.

The fabrics

The assemblage has been divided into numerous fabric classes. Where applicable, these fabric classes have been assigned codes corresponding to those published in the *National Roman Fabric Reference Collection* (NRFRC) (Tomber and Dore 1998). Each of these fabric classes is described below. The fabrics have also been grouped together into 31 broader 'Ware Groups'. These grouping have been achieved on the basis of shared characteristics, such as firing, primary inclusion or origin. Summary information on these ware groups is given in Table 6.6.

Table 6.6 Summary of the Roman pottery by ware group and excavation area

Ware Group	A	B	C	D	<>*	Ct.	Wt.(g)	EVEs
LI	3	95	144	73	13	328	2363	3.01
GR	8	140	188	51	142	529	8749	4.27
REDM	90	1118	1106	256	111	2681	36,394	36.08
GW	78	813	564	411	134	2000	23,535	25.71
GWG	2	54	21	3	13	93	5086	0.75
BL	101	722	567	713	120	2223	17,746	23.01
OX	22	287	318	66	87	780	5666	8.86
CC	-	15	3	8	1	27	127	0.57
GL	-	2	-	-	-	2	6	0
WH	-	10	4	-	1	15	128	0.35
WS	-	8	12	2	16	38	211	0.12
SVW	52	242	430	445	92	1261	18,822	8.68
SAVGT	19	4	104	34	19	180	6324	1.29
SOWWS	-	7	73	30	60	170	912	4.00
BB1	114	2105	784	379	303	3685	39,245	51.86
ROBSH	-	8	-	-	2	10	74	0.27
ALH RE	-		3	-	-	3	257	0.31
OXFRS	6	173	14	1	7	201	2565	5.99
OXFPA	-	7	-	-	-	7	146	0.21
NFOR	1	31	17	-	9	58	543	0.57
LNV	-	1	2	-	5	8	80	0
SWWSm	-	1	14	2	3	20	701	1.20
OXFWHm	1	18	7	-	6	32	1393	1.24
OXFWSm	-	3	1	-	-	4	158	0.22
OXFRSm	-	37	4	2	1	44	580	0.59
RHIM	-	2	-	-	-	2	323	0.27
SAM	6	123	103	35	46	313	4085	6.49
CNG BS	-	5	1	-	-	6	41	0.13
MOSBS	-	3	-	-	-	3	10	0.22
BAT AM	3	53	-	6	5	67	3727	0
GAL AM	-	14	-	-	1	15	350	0
Totals	506	6101	4484	2517	1197	14,805	180,347	186.27
Key: *Comprises unstratified material. Quantities given for each area are the sherd count								

Imported finewares

1. GAULISH SAMIAN (SAM)

A total of 313 sherds of Gaulish Samian was recovered weighing 4085g (6.53 EVEs). With the notable exception of two vessels from ditch [3843] fill (3848) which could be substantially reconstructed, most material was well-fragmented. Surface survival was variable, but with most material exhibiting moderate or severe loss of slip (excoriation), which in the most extreme instances can make identification to source difficult. The fabric classes identified were as follows:

1a. South Gaulish Samian: La Graufesenque (**LGF SA**) (Tomber and Dore 1998, 28).
10 sherds; 90g; 0.07 EVEs. Forms: Platters (Dr. 18) and cup (Dr. 27).

1b. South Gaulish Samian: Montans (**MON SA**) (Tomber and Dore 1998, 29).
1 sherd; 29g; 0.16 EVEs. Forms: Decorated bowl (Dr. 37).

1c. Central Gaulish Samian: Lezoux (**LEZ SA2**) (Tomber and Dore 1998, 32).
268 sherds; 3670g; 5.70 EVEs. Forms: Beaker (Dr. 72), cup (Dr. 27, Dr. 33, O&P/LV13), bowls (Dr. 31, Dr. 31r, Dr. 37, Dr. 38), dishes (Dr. 18/31, Dr. 79), mortaria (Dr. 45).

1d. East Gaulish Samian: all sources (**EGSA**) (Tomber and Dore 1998, 34-41).
34 sherds; 296g; 0.56 EVEs. Forms: Beaker (indet.), cup (Dr. 33), bowls (Dr. 31, Dr. 31r, Dr. 44), dishes (Dr. 32), mortaria (indet.).

The incidence of Samian according to rim EVEs was 3.5% (2.3% by sherd count total). This accords with the pattern established for smaller rural sites by Willis where the large majority of groups register less than 5% of the EVEs total (Willis 2005: 7.2.7). Representation across the excavated areas is shown in Table 6.7, and demonstrates that the incidence is highest in Areas B and C. The relative scarcity from Area D may reflect the character of the archaeology in this area, with most deposits pre-dating the main period of Samian usage for most Romano-British sites. The breakdown of vessel forms shows a preponderance of plain classes (Table 6.8), with decorated bowls still relatively common (16.5% of EVEs total). This pattern is comparable with the majority of Romano-British rural assemblages (Willis 2005: 7.3.9). The plain vessels comprise mainly dishes/bowls (53% of EVEs total) and cups/beakers (28.5% of EVEs total). Mortaria are present in the assemblage, but only as base sherds of uncertain form. The exception is a single Drag. 45 (0.06 EVEs). The dating of the Samian assemblage is discussed in Section 6.2 below.

2. CENTRAL GAULISH BLACK-SLIPPED WARE (**CNG BS**) (TOMBER AND DORE 1998, 61).
6 sherds; 41g; 0.13 EVEs. Forms: Beakers (Gillam 1976, no. 48).

3. MOSELKERAMIK BLACK-SLIPPED WARE (**MOS BS**) (TOMBER AND DORE 1998, 60).
3 sherds; 10g; 0.32 EVEs. Forms: Beakers (funnel-necked, indented).

Regional finewares

4. OXFORD RED/BROWN-SLIPPED WARE (**OXF RS**) (TOMBER AND DORE 1998, 176).
201 sherds; 2565g; 5.99 EVEs.

The kilns south of Oxford (Young 1977) are the source for the majority of Romano-British finewares from the site. All can be expected to date to the main period of expansion for the industry (after *c.* AD 270). The very large bulk (5.54 EVEs or 92.5%) was recovered from

Table 6.7 Samian by manufacturing region. Incidence across Site Areas A-D and unstratified contexts. Percentage values show relative abundance by area as a proportion of all pottery

Region	**South**	**Central**	**East**	**Totals**					
Site	*Ct.*	*Ct.*	*Ct.*	***Ct.***	***%Ct.***	***Wt.(g)***	***%Wt.***	***EVEs***	***%EVEs***
A	-	6	-	6	1.2	44	1.1	30	6.4
B	5	110	8	123	2.0	2208	2.7	324	3.9
C	4	78	21	103	2.3	765	1.4	119	1.9
D	1	30	4	35	1.4	415	1.8	65	3.3
U/s	1	44	1	46	3.8	653	4.0	111	7.5
Totals	10	268	34	313	2.1	4085	2.3	649	3.5

Table 6.8 Samian summary showing breakdown by vessel form/fabric.

Form (generic)	**Form (specific)**	**LGF SA**	**MON SA**	**LEZ SA2**	**EGSA**	**Totals**
Beaker	72	-	-	0.10	-	**0.10**
Cup	(indet.)	-	-	0.10	-	**0.10**
	27	0	-	0.10	-	**0.10**
	33	-	-	1.30	0.17	**1.47**
	O&P/LV13	-	-	0.09	-	**0.09**
Bowl (plain)	38	-	-	0.58	-	**0.58**
	44	-	-		0.08	**0.08**
Bowl (decorated)	37	-	0.16	0.88	0.04	**1.08**
Dish	(indet.)	-	-	0.10	0.12	**0.22**
	18/31	-	-	0.33	-	**0.33**
	18/31r	-	-	0.12	-	**0.12**
	31	-	-	0.79	0.07	**0.86**
	31r	-	-	0.89	0.12	**1.01**
	35/36	-	-	0.17	-	**0.17**
	79	-	-	0.09	-	**0.09**
Platter	18	0.07	-	-	-	**0.07**
Mortarium	45	-	-	0.06	-	**0.06**
Totals		0.07	0.16	5.70	0.60	6.53

Area B, a pattern reflecting the primarily late dating of deposits in the area of villa buildings. A range of fineware forms are represented (example: Figure 6.7, no. 74). Bowls/dishes are most common (71 vessels/3.77 EVEs), followed by flagons/bottles (1.40 EVEs) and beakers (11 vessels/0.82 EVEs) and flagons/bottles (2 vessels/1.40 EVEs). Forms are mostly those in production across the period 270/300-400+ (Young's beaker types C23/24, C29; bowls C45, C47, C51). There are relatively few forms suggestive of dating after *c.* AD 350.

5. OXFORD PARCHMENT WARE (**OXF PA**) (TOMBER AND DORE 1998, 174).
7 sherds; 146g; 0.21 EVEs.

White-fired, red-painted 'parchment wares' are present only sparsely, as carinated bowls of Young's P24 class (2 vessels) and a jar (Young's P8 or 9?) with painted bands (Young 1977).

6. NEW FOREST COLOUR-COATED/SLIPPED (HANTS) (WARE GROUP NFOR)

New Forest ware is significantly less-well represented than Oxfordshire fineware (above). Most common are beakers in hard and dark-firing colour-coated fabrics. Most material is well-fragmented and the few better-identifiable vessels are of Fulford's types 42.9 and 44 (Fulford 1975). The scarcity of bowls suggests a preference for, or better access to, equivalent Oxfordshire products.

6a. New Forest colour-coated ware (Includes 'metallic' type) (**NFO CC**) (Tomber and Dore 1998, 141).
49 sherds; 357g; 0.17 EVEs.

6b New Forest (fine) red-slipped ware (**NFO RS**) (Tomber and Dore 1998, 142).
9 sherds; 186g; 0.40 EVEs.

7. LOWER NENE VALLEY COLOUR-COATED WARE, CAMBRIDGESHIRE (**LNV CC**) (TOMBER AND DORE 1998, 118).
8 sherds; 80g.

This type is the least well-represented of the major Romano-British finewares, reflecting the distance from its source and availability of equivalent produced nearby. Forms represented are all beakers and include an indented/scale-decorated form from Area C ditch [**2050**] common to 3rd century production.

Local and unsourced finewares and flagons

8. LOCAL/UNSOURCED COLOUR-COATED WARE (CC)

8a. **OXcc1**: Pale orange with pale grey core. 'Chocolate brown' slip. Soft with smooth feel. Silty/inclusionless. One sherd with slip-trailed decoration. Probably North Wilts/Gloucestershire type; as Cirencester TF105 (Rigby 1982a, D09).
14 sherds; 84g; 0.12 EVEs.

8b. **OXcc2**: Soft with smooth feel. Orange with brown or dark brown slip. Underslip clay roughcasting. Common fine quartz. Probably North Wilts type.
10 sherds; 50g; 0.07 EVEs.

8c. **OXcc3**: Soft with smooth feel. Pale orange with red-orange slip. Common fine quartz; strongly micaceous. An early Oxfordshire type?
1 sherd; 6g; 0.15 EVEs.

8d. **REcc1**: Blue-grey throughout; hard, dense (conchoidal fracture). Inclusionless. Probably an (unintentionally?) reduced-fired variant of type OXcc1.
2 sherds; 25g; 0.23 EVEs.

9. LOCAL/NORTH WILTSHIRE LEAD GLAZED WARE (GL)

Lead-glazed ware (**OXgl**). Pale orange with red-orange slip; yellowish green external glaze. Common fine quartz; probably North Wilts/Wanborough type.
2 sherds; 6g.

10. WHITE-SLIPPED OXIDISED WARE, LOCAL/ WILTSHIRE (WS)

OXWS: Orange exterior and grey interior with thin cream-coloured external slip. Sandy feel. Common fine/medium quartz. May include common or sparse voids from burnt-out organics and can be sparsely micaceous. Flagons only.
38 sherds; 211g; 0.12 EVEs

Mortaria

The mortaria make up 1.8% of the total (by EVEs) and comprise regional or continental imported types. None were stamped. There is no evidence for use before the second century, and perhaps not before *c.* AD 150, and with the large majority dating to the 3rd and 4th centuries.

The Oxfordshire kilns contribute the largest proportion (2.16 EVEs or 60%), with whiteware (OXF WHm) vessels most common. Typologically the earliest is a vessel which matches Young's type M2, the dating for which is suggested as *c.* AD 100-170 (Young 1977, 68). The majority of whiteware vessels are flanged forms equivalent to Young's M17/M18 (four vessels/0.46 EVEs) and M22 (six vessels/0.55 EVEs). Dating for such types spans the mid and late 3rd century, and for Type M22 extends to the end of the 4th century. Mortaria in red-slipped ware (OXF RS) are consistently of wall-sided form (ten vessels/0.59 EVEs), equivalent to Young's C97,

a type dated in the 240-400+ range (*ibid*. 173). White-slipped mortaria (OXF WSm) are least well represented among the Oxfordshire group (above). Forms consist of flanged forms approximating to Young's Types WC 4/5 and of the period *c*. AD 240–300 (*ibid*., 121-122).

Mortaria in Southwest, white-slipped ware (SOW WSm) are the next best represented type (1.20 EVEs or 34%). The rolled rim, collared and wall-sided forms represented match known examples from Cirencester or Wanborough. Production may have begun early in the 2nd century and probably continues to the mid-3rd, with Rigby (1982b, D04) arguing that its demise at this time was as the result of pressure from a burgeoning Oxfordshire industry. Stylistically, the earliest bead/rolled-rim vessels from the Lyde Green group (four vessels/0.72 EVEs; three illustrated on Figure 6.5, nos. 50-51) are most likely Antonine. The collared (three vessels/0.18 EVEs; Figure 6.5, no. 52) and near wall-sided forms (one vessel/0.13 EVEs; Figure 6.5, no. 53) are probably of the late 2nd to mid-3rd centuries (Seager-Smith 2001, 223-225).

Imported mortaria are a very limited presence at Lyde Green. The few scraps of Samian include a Central Gaulish wall-sided vessel (Drag. 45) from Area B buried soil 3806. The two sherds in Rhineland fabric RHI WH are almost certainly from the same vessel (Figure 6.5, no. 54). Comparable collared forms are known from Exeter and the suggested dating is in the AD 150-250 range (Hartley 1991, 207).

Regionally traded mortaria

11. SOUTHWEST WHITE-SLIPPED WARE, NORTH WILTSHIRE (SWWSM)

SOW WSm: Mortaria in Southwest, white-slipped ware (Tomber and Dore 1998, 192).
20 sherds; 701g; 1.20 EVEs.

12. OXFORDSHIRE WHITE WARE (OXFWHM)

OXF WHm: Oxford white ware (Tomber and Dore 1998, 174). *Forms*: One bead/rolled rim vessel (Young 1977, 68; M2); most are later flanged classes (*ibid*., 72-76; M17 and M22).
32 sherds; 1393g; 1.24 EVEs.

13. OXFORDSHIRE WHITE-SLIPPED WARE (OXFWSM)

OXF WSm: Oxford white-slipped ware (Tomber and Dore 1998, 176). *Forms*: The single rim is flanged; close to Young's WC4 (1977, 120).
4 sherds; 158g; 0.22 EVEs.

14: OXFORDSHIRE RED-SLIPPED WARE (OXFRSM)

OXF RSm: Mortaria in Oxford red-slipped ware (Tomber and Dore 1998, 174).
44 sherds; 580g; 0.59 EVEs.

Imported mortaria

15. RHINELAND WHITE WARE (RHIM)

RHL WH: Rhineland white ware (Tomber and Dore 1998, 174; Hartley 1991, 190). Forms: Collared forms as C58 at Exeter and dated *c*. AD 150-250 (*ibid*., 206–207). 2 sh; 323g; 0.27 EVEs.

In addition to the types described, there are a small number of mortarium sherds in Central (3 sherds, 29g) and East Gaulish Samian fabrics (2 sherds, 76g), mostly unfeatured base sherds. These Samian fabrics are described above.

Amphorae
by Dr. D. Williams

The small amphora assemblage consists of 82 sherds weighing 4077g, many of them small and friable bodysherds. These can be identified as belonging to two of the most commonly found amphorae forms imported into Roman Britain: the globular-shaped Baetican olive-oil type Dressel 20 (Berni 2008; Carreras in Williams and Keay 2006; Peacock and Williams 1986: Class 25) and the flat-bottomed Gauloise amphorae series, most probably represented here by Gauloise 4, the most commonly made form of the Gauloise series (Laubenheimer in Williams and Keay 2006; Laubenheimer 1985; Peacock and Williams 1986: Class 27).

Dressel 20

16. **BAT AM**: BAETICAN AMPHORA FABRIC (TOMBER AND DORE 1998, 84-85).
67 sherds; 3727g.

Gauloise flat-bottomed series

17. **GAL AM**: GAULISH AMPHORA FABRIC (TOMBER AND DORE 1998, 93-95).
15 sherds; 350g.

The majority of the sherds belong to the Dressel 20 form, which was in production over a long period, from the reign of Claudius until shortly after the middle of the 3rd century AD (Berni 2008; Rodriguez-Almeida 1989). Baetican olive-oil was still exported to Roman Britain after this date though on a much reduced scale and in a smaller, thinner-walled version of Dressel 20 known as Dressel 23 (Carreras and Williams 2003). This long period of production means that it is extremely difficult to date individual bodysherds, such as those from Lyde Green. There are sections of two handles present but, unfortunately, these are too small to suggest any refinement of date.

Dressel 20 sherds are found in dated contexts on the site covering the period of Roman settlement from the 1st century AD to the 4th century. There seems to be a slight increase in numbers towards the 3rd and 4th centuries, but it is difficult to read much into this as the numbers of sherds are relatively small.

Apart from olive-oil, wine was certainly brought to the site, as evidenced by the presence of 16 small bodysherds which represent the flat-bottomed thin-walled, wine amphorae from the Gauloise amphorae series (Laubenheimer in Williams and Keay 2006). Unfortunately, it is not possible to be entirely sure which exact form these sherds represent but it is most likely to have been Gauloise 4, the most commonly found of the Gauloise series in Roman Britain. This form was predominantly made in southern France, more particularly around the mouth of the Rhône in Languedoc, where a number of kilns are known (Laubenheimer in Williams and Keay 2006; Laubenheimer 1985). This type was imported into Britain from shortly after the Boudiccan revolt to at least the late 3rd century AD (*ibid*.).

The Gaulish sherds that were found in dated contexts at Lyde Green are all dated to the 3rd – 4th century AD (Ceramic Phase 3: deposits 3741 and 3878). This date would seem to coincide with the building of the villa, and it is possible that Gaulish wine was only brought to the site by the prosperous owners of the newly built villa.

Regional Coarsewares

18. SEVERN VALLEY WARE, LOCAL/GLOUCESTERSHIRE/ WORCESTERSHIRE (SVW)

Severn Valley wares were produced for the most part in the Gloucester area and northwards, with production spanning the Roman period. Early production is not well understood; the distinctive charcoal-tempered sub-type, mainly present as reduced-fired vessels (SVW REo), certainly represent an early variant, present from Gloucester and other sites from 1st and 2nd century contexts (Timby 1990, 250). The attribution of the buff-firing of grog-tempered fabrics (SVW GR1-2) within the Severn Valley ware umbrella is less certain. These occur primarily from deposits dated to the mid- or later 1st century in Area D and occur primarily as jars (Figure 6.3, nos. 11-16 & 20). The fabrics share some characteristics with the early Severn Valley wares of similar dating recognised from Gloucester and other sites (*ibid*.). The forms, however, do not sit comfortably with the Severn Valley ware series and it is tempting to see this material as a local variant, combining elements of the Severn Valley ware and Southeastern British grog-tempered ware traditions.

Severn Valley wares are relatively poorly represented overall (5.3% of EVEs total/9.4% by sherd count). Paucity of this ware is a feature of sites in the Bristol area, for example at Bedminster (Timby 2016, 20: 0.5% by EVEs/4.7% of sherd count). This compares to sites in the Severn Vale at Frocester and Stonehouse, approximately 20-25km to the north where representation is *c*. 23-41% by sherd count (McSloy 2013; Timby 2000). There is good evidence to suggest that incidence at Lyde Green is related to chronology, with the type mainly confined to earlier-dated deposits. Notably it is substantially more from southern area D (11.2% by EVEs total, compared to 2.4–5.1% from Areas B/C). A significant proportion of the Severn Valley wares from Area D, the focus of dating for which is in the mid-1st to early 2nd century, consists primarily of grog or charcoal-tempered variants with most forms consisting of jars (Figure 6.3, nos. 3 and 5) . Overall, the range of forms is jar (3.96 EVEs or 66.3%) and tankard dominated (1.18 EVEs or 19.8%) with a very few bowls/dishes. Most jars are necked or globular forms (Webster's Storage Jar Type A), with wide-mouthed vessels (Webster 1976, Type C) conspicuously absent. The tankards are straight-sided classes (Webster 1976, Type E, nos. 38-39); this conforming with a regional trend first noted in relation to material from Sea Mills, Bristol, by Bennet (1985, 40). This pattern is likely chronological, suggesting, as does other evidence that Severn Valley ware use is a largely early and middle Roman phenomenon in the region.

18a. **SVW OX2**: 'Standard' oxidised SVW (Tomber and Dore 1998, 149).
539 sherds; 5666g; 3.93 EVEs.

18b. **SVW OXo**: Charcoal-tempered (oxidised) SVW. Pale orange throughout or with grey core. Smooth/ powdery. Common charcoal inclusions or voids.
58 sherds; 872g; 0.67 EVEs.

18c. **SVW REo**: Charcoal-tempered (reduced) SVW. Grey throughout or with patchy orange/grey exterior. Smooth/slightly sandy feel. Common charcoal inclusions or voids.
351 sherds; 5668g; 1.37 EVEs.

18d. **SVW GR1**: SVW 'early' grogged variant. Light brown with grey core. Smooth feel. Common or medium/coarse grey or buff grog.
99 sherds; 2818g; 0.97 EVEs.

18e. **SVW GR2**: SVW 'early' grogged variant with calcareous inclusions. Light brown with grey core. Smooth feel. Common or medium/coarse grey grog; common plate-like and sub-rounded voids (leached limestone/shell).
214 sherds; 3798g; 1.74 EVEs.

19. SAVERNAKE TYPE WARE, LOCAL/NORTH WILTSHIRE (SAV)

As has been noted, North Wiltshire is the likely source of some reduced sandy coarsewares. Coarse grogged wares, identified as Savernake type, were almost certainly produced across north Wiltshire and other than near Mildenhall in the Savernake Forest. Dating probably spans the mid-1st and earlier or mid-2nd century AD. Typically for the type, it occurs at Lyde Green exclusively as thick-walled storage jars (Figure 6.3, no. 10).

SAV GT: Savernake wares (Tomber and Dore 1998, 149).
180 sh; 6324g; 1.29 EVEs.

20. SOUTHWEST WHITE-SLIPPED WARE, LOCAL/ WILTSHIRE (SWWS)

A north Wiltshire source for Southwest, white-slipped wares has been postulated based on this type's distribution. It occurs in quantity in Cirencester as flagons and mortaria (Rigby 1982b, D03-5: Fabric 88) and at Wanborough as mortaria (Seager-Smith 2001, 223: Fabric 8). The flagon forms from Lyde Green (Figure 6.5, nos. 48-49) are similar to those from Cirencester - each with pronounced rim and vestigial neck rings. Both also feature the tanged handles which are a technological feature of the type (Rigby 1982b, D04-5). Dating across the later 2nd and earlier 3rd centuries is likely.

SOW WS: Southwest, white-slipped ware (Tomber and Dore 1998, 192).
170 sherds; 912g; 4.00 EVEs.

Forms: flagons (mortaria are discussed separately above)

21. WHITEWARE, UNSOURCED; PROBABLY OXFORD (WH)

21a. **WHf**: White exterior and pinkish core/interior. Smooth feel. Common fine quartz.
13 sherds; 108g.

21b. **WHc**: White throughout. Sandy/harsh feel. Common medium quartz and common/sparse red iron or clay pellet.
2 sherds; 20g; 0.35 EVEs.

22. DORSET/SOMERSET BLACK-BURNISHED WARE (BB1)

The Black-burnished ware comprises the major regional coarseware type in use at the site. The EVEs value (27.7% of the total assemblage) is to an extent made artificially high by the fully reconstructed cremation urns (Figure 6.2, nos. 83-86). Representation according to sherd count (24.9%) is close to that for groups from Lawrence Weston (Boore 2000, 37: 23.9%), Inns Court (Burchill 2007, 64: 18.8%) and Bedminster (Timby 2016, 20: 18.2%). Jar forms dominate (34.41 EVEs or 66.4%), although again the EVEs total is inflated by the reconstructed cremation vessels. Next most common are dishes (11.75 EVEs or 22.7%), followed by bowls (5.85 EVEs or 9.4%) and with small numbers (<1% EVEs total) of flagons and small jars/ beakers. The breakdown of forms implies use from the 2nd century and through to the mid-3rd to 4th centuries AD. The jars include early classes (Holbrook and Bidwell 1991: Type 12) with acute-angled lattice, shorter and more-upright rims with burnished waves to the rim (Figure 6.3, no. 22 and Figure 6.2, nos. 83-84), and later styles (after *c.* AD 220) with obtuse-angled lattice and with wider-flaring everted rims (*ibid.* Type 20). 'Open' vessel forms are similarly a mix of earlier styles, consisting of dishes/bowls with flat or 'moulded' rims (*ibid.* Type 36-40) and later style plain-rimmed dishes (*ibid.* Type 56-59) and conical, flanged bowls (*ibid.* Type 45). These can be expected to belong to the period after *c.* 180/200, and after *c.* AD 250 for Type 45 vessels (Holbrook and Bidwell 1991, 98-100).

22a. **DOR BB1**: Southeast Dorset Black-burnished ware (Tomber and Dore 1998, 127).
3629 sherds; 38493g; 51.09 EVEs.

22b. **SOW BB1**: Southeast Dorset Black-burnished ware (Tomber and Dore 1998, 129).
56 sherds; 752g; 0.77 EVEs.

23. MIDLANDS SHELL-TEMPERED WARE (ROB SH)

Roman shell-tempered wares (ROB SH) are a very rare presence in this assemblage, with sherds either residual in medieval deposits or unstratified. The few rim sherds are from jars with undercut/hooked rims and one flanged bowl. The forms are typical of the late repertoire of the main production site at Harrold, Bedfordshire (Brown 1994). In western Britain at sites including Cirencester and Bath this type appears confined to deposits dating after *c.* AD 350/360.

ROB SH: Midlands shell-tempered ware; probably Harrold, north Bedfordshire (Tomber and Dore 1998, 212/115).
10 sherds; 74g; 0.27 EVEs.

24. ALICE HOLT/FARNHAM GREYWARE, REGIONAL (ALH)

The Alice Holt/Farnham greywares are present in late-dated deposits from Area B as sherds from large jars with distinctive squared rims. Storage jars of this type are widely dispersed across southern Britain in the 4th century and it has been speculated that the distribution reflects transport of commodities such as honey or other foodstuffs, rather than of pottery containers (Malcolm Lyne pers. comm.).

ALH RE: Alice Holt/Farnham greyware (Tomber and Dore 1998, 138).
3 sherds; 257g; 0.31 EVEs.

Local and unsourced Roman Coarsewares

25. MICACEOUS GREYWARE/BLACK-FIRING COARSE WARE, LOCAL (REDM)

This grouping, which makes up 19.7% of the assemblage total (by EVEs), encompasses a range of grey and black-firing fabrics united by abundant mica content. It is representative of a regionally important tradition recognised across the Bristol area (Boore 2000, 38; Timby 2016, 21-22), and is the main subject of fabrics analysis (below). Distribution concentrating in the Severn Vale northwards to Gloucester is suggestive of a local source (or sources) and Timby has suggested that this is most likely in the Bristol area (Timby 2000, 137). The limited-scale thin-section analysis undertaken by Imogen Wood as part of this project (Appendix 4) rules out a source from the kilns at Congresbury, south of Bristol and supports a source, probably to the east of Bristol and local to Lyde Green. Albeit based on a small sample this analysis hints at some development of this type across its period of production with evidence for refinement of later fabric samples.

At Gloucester the type first occurs in the early 3rd century but is commonest in the 4th (Ireland 1983, 101: TF 5). At Frocester, it makes up 24% by EVEs and occurs as early as the 2nd century (Timby 2000, 137: fabric 55). Similar dating, although perhaps not before *c.* AD 150, is evident from the Lyde Green material (below). The tradition is characterised by conservatism of form, the large bulk comprising jars (70% of EVEs total), mainly everted (or cavetto)-rimmed types, some copying Black-burnished ware styles (Figure 6.4, no. 30). The influence of the BB1 is also clear from the dish and bowl forms which make up the majority of the remainder (26% of EVEs total). The presence of flat-rimmed dishes (Figure 6.4, no. 32) in styles close to BB1 types (Holbrook and Bidwell 1991, 97; Type E), is taken as further evidence for production before AD 200. Plain-rim dishes predominate (Figure 6.6, nos. 57-58) and these together with flat/grooved forms suggest a focus for dating after *c.* AD 180/200.

25a. **GWA1**: Grey throughout or with paler core; sandy/harsh feel. Abundant medium/fine quartz; common mica.
722 sherds; 9632g; 9.21 EVEs.

25b. **GWA2**: Grey throughout with paler core and red margins; sandy/smooth feel. Abundant fine quartz; common mica.
785 sherds; 9347g; 11.11 EVEs.

25c. **GWA3**: Grey with paler core; hard, dense with smooth feel. Abundant fine quartz; common mica.
32 sherds; 617g; 0.46 EVEs.

25d. **BLA1**: Dark grey/black exterior surface with grey core/interior. Sandy feel. Abundant medium/fine quartz; common mica.
327 sherds; 4963g; 4.50 EVEs.

25e. **BLA2**: Dark grey/black exterior surface with grey core/interior. Smooth/sandy feel. Abundant fine quartz; common mica.
548 sherds; 8003g; 6.09 EVEs.

25f. **BLA3**: Dark grey/black with paler margins. Smooth/silty feel. Common mica.
267 sherds; 3832g; 4.71 EVEs.

26. GREYWARES, LOCAL/REGIONAL (GW)

The other non-micaceous, reduced coarsewares are a diverse group most likely derived from a variety of sources. The finer types show some similarities with products of the Venus Street, Congresbury kilns (Usher and Lilly 1964), although the characteristic bifid rim seen with this type is only sparsely in evidence and such a source is not suggested by thin-section analysis. A more significant proportion can be expected to have been supplied from the North Wiltshire kilns (Anderson 1979), including at least some of the greyware tankards (Figure 6.5, nos. 38-39). Such forms are more abundant (3.18 EVEs) than are the Severn Valley ware vessels (1.16 EVEs) which they imitate, and are a notable feature of earlier Roman groups, in particular those from Area D. The straight-sided form of most, and the use of burnished lattice is close to the Severn Valley ware prototypes (Webster 1976) and suggests mainly 2nd century dating. The tankards aside, the greyware group is dominated by jar and utilitarian dishes/bowls. The jars are a mix of necked forms, including examples with one or two handles (Figure 6.4, nos. 27-28), which probably functioned for holding or carrying water, and forms copying BB1 cooking pots (Figure 6.4, no. 29).

26a. **GW1**: Grey throughout or with paler margins. Smooth/silty feel. Common fine quartz; sparse red/brown iron.
262 sherds; 2757g; 2.25 EVEs.

26b. **GW2**: North Wiltshire greywares. Grey throughout. Sandy feel. Abundant fine/medium quartz; sparse larger (rounded) quartz. Occasionally with burnt-out organics.
1105 sherds; 12675; 13.27 EVEs.

26c. **GW3**: Hard, dense, grey throughout. Sandy feel. Common fine quartz and sparse coarse quartz/quartzite.
260 sherds; 2577g; 5.47 EVEs.

26d. **GW4**: Grey throughout; sandy/harsh feel. Common medium quartz and coarser sub-rounded quartz/ quartzite.
124 sherds; 2881g; 2.34 EVEs.

26e. **GW5**: Grey surfaces and red-brown core; hard, with sandy feel. Abundant medium quartz.
14 sherds; 155g; 0.15 EVEs.

26f. **GW6**: Dark grey pale grey core. Sandy feel. Abundant rounded/sub-rounded medium quartz; sparse grey grog.
30 sherds; 802g; 0.42 EVEs.

26g. **GW7**: Pale grey with red/brown margins; sandy/ harsh feel. Common medium quartz and coarser sub-rounded quartz/quartzite.
33 sherds; 400g; 0.18 EVEs.

26h. **GW8**: Grey throughout, sometimes with darker surface (slip?); hard, dense, smooth feel. Silty/ inclusionless or may be sparsely micaceous.
172 sherds; 1288g; 2.72 EVEs.

27. BLACK-FIRING WARE, LOCAL/REGIONAL (BL)

Wheelthrown black-firing fabrics (principally type BL1) are a persistent presence among the earliest (CP1) groups from Area D (below), where forms comprise mainly necked/shouldered bowls (Figure 6.3, nos. 6-7 and 17). Similar material is known from southern Gloucestershire, and north and north-western Wiltshire. Kilns recently excavated near Westbury (Corney *et al.* 2014) are suggestive of a regional tradition. The presence of similar wares at Bagendon (Clifford 1961) and in early military contexts at Cirencester (Rigby 1982a, TF5), indicates use before *c.* 60/70 AD, although at Cirencester the type continues well into the 2nd century. Within the Lyde Green assemblage the tradition of black-firing coarsewares certainly persists beyond this period (Ceramic Phases 2 and 3), perhaps produced alongside the 'local' greywares. Jars account for half of all forms (50.9% of EVEs), most of which are neckless forms derived from the Black-burnished ware series. Among the few 'non-utilitarian' forms are a small ovoid beaker and a bowl imitating the Samian form 36 (Figure 6.4, no. 35). A late tradition of coarse black-firing wares in forms imitative of Black-burnished forms (mainly plain-rim dishes and flanged bowls) is represented by fabric BL4.

27a. **BL1**: Dark grey/black surface with grey core/ interior. Smooth feel; commonly burnished. Abundant fine quartz; may be slightly micaceous.
442 sherds; 2855g; 5.38 EVEs.

27b. **BL2**: Dark grey/black throughout. Sandy feel. Common fine/medium quartz.
1580 sherds; 11353g; 14.63 EVEs.

27c. **BL3**: Soft, dense, dark grey with paler margins. Smooth (burnished) surfaces. Inclusionless.
2 sherds; 60g.

27d. **BL4**: (Late Black-burnished imitations) Dark grey exterior with paler core/interior. Gritty/harsh feel. Common medium/coarse (sub-rounded) quartz.
199 sherds; 3486g; 3.0 EVEs.

28.OXIDISED WARE, LOCAL/REGIONAL (OX)

28a. **OX1**: Orange with grey core; sandy feel. Common medium/fine quartz.
393 sherds; 2489g; 4.56 EVEs.

28b. **OX2**: Thin/patchy orange surface, with grey core; sandy feel. Common medium/fine quartz; common or sparse red/brown iron.
174 sherds; 1407g; 2.27 EVEs.

28c. **OX3**: Hard, sandy, micaceous. Orange with grey core. Common medium (rounded/polished) quartz. Commonly micaceous.
45 sherds; 365g; 0.11 EVEs.

28d. **OX4**: Fine, pale orange throughout; smooth feel. Sparse iron. Possibly Severn Valley ware related (Shepton Mallet).
8 sherds; 109g; 1.00 EVEs.

28e. **OX5**: Pale orange with pale grey core. Soft with powdery surfaces. Silty with common or sparse polycrystalline quartz (sandstone) up to 3mm; also sparse red iron.
5 sherds; 188g.

28f. **OX6**: Patch red/brown surfaces and grey core. Abundant fine quartz; and sparse fine grog. Early type associated with roller-stamped butt-beaker copies.
2 sherds; 14g.

28g. **OX7**: Orange/buff throughout. Soft with smooth feel. Common fine quartz; sparsely/moderately micaceous.
74 sherds; 494g; 0.35 EVEs.

'Native' and 'Transitional' Wares (local and regional)

29. HANDMADE CALCAREOUS WARE, LOCAL AND REGIONAL (LI)

The pottery in this grouping represents a pre-Roman tradition known to continue into the second half of the 1st century AD. Most is poorly preserved, the calcareous inclusions at least partially leached away as the result of the burial environment, a factor making confident attribution difficult. A handful of sherds in a fabric containing argillaceous (mudstone?) inclusions

probably represents a similar tradition. Vessel forms comprise neck-less/bead-rimmed jars (Figure 6.3, no. 1 and no. 19) which compare to styles common from mid-1st century groups at Sea Mills (Bennet 1985; Timby 1987) and Henbury (McSloy 2006, fig. 13). Utilisation of relatively local carboniferous-era limestones, running from the Mendips north to Bristol, is likely for the majority in this group. There are, in addition, a few sherds in forms more typical (Figure 6.3, no. 4) of pottery made in the Malverns (Peacock 1968) and extensively traded in the mid and later 1st century AD.

29a. **LI**: Dark grey or grey brown throughout. Smooth feel. Common angular limestone inclusions or voids.
319 sherds; 2240g; 2.75 EVEs.

29b. **MS**: Dark brown throughout. Smooth feel. Sparse sub-rounded, buff-coloured mudstone or clay pellet inclusions.
5 sherds; 105g; 0.16 EVEs.

29c. **MAL LI**: Black or dark grey-brown throughout. Smooth feel. Common angular limestone inclusions.
4 sherds; 18g; 0.10 EVEs.

Grog-tempered wares

30. GROG-TEMPERED WARE, LOCAL? (GR)

30a. **GR1**: Dark grey throughout or with red brown exterior surface. Smooth feel. Common or sparse very fine grog; common silt-sized quartz.
9 sherds; 72g; 0.21 EVEs.

30b. **GR2**: Light brown, commonly with grey core. Smooth/soapy feel. Common or sparse medium/coarse self-coloured grog or clay pellet.
95 sherds; 1458g; 0.81 EVEs.

30c. **GR3**: Dark grey with reddish margins. Sandy feel. Common or sparse fine/medium dark grey grog; common or sparse medium quartz.
141 sherds; 3399g; 1.24 EVEs.

30d. **GR4**: Patchy grey/brown surfaces; grey core. Smooth/soapy feel. Common medium/coarse dark grey grog.
279 sherds; 3784g; 1.70 EVEs.

31. GROG-TEMPERED GREYWARE, LOCAL/NORTH WILTSHIRE (GWG)

31a. **GWG1**: Fine grogged greywares. Grey throughout. Soft with smooth feel. Common or sparse fine dark grey grog.
19 sherds; 232g; 0.58 EVEs.

31b. **GWG2**: Coarser grogged greywares with organic inclusions. Grey throughout. Soft with harsh feel. Common fine/medium dark grey or brown grog; sparse voids from burnt out organics.
74 sherds; 4854g; 0.17 EVEs.

The chronology of the ceramic assemblage

For the purposes of chronological analysis, the assemblage has been divided into three broad ceramic phases. Ceramic phase 1 spans the mid-1st century AD to the early 2nd century AD and is described as 'Early Roman'. Ceramic phase 2, or 'Middle Roman', dates from the mid-2nd to mid-3rd century AD. Finally, Ceramic phase 3 covers the Late Roman period, spanning the late 3rd to late 4th/early 5th century AD (Table 6.9). The discussions that follow are based on this ceramic phasing, which has been constructed from exemplar groups (i.e. stratigraphically unified groups of contexts, where dating is suggested by date markers among the pottery) and based primarily on the traded ware types. The composition of selected feature groups from Ceramic Phases 1-3 is shown in summary in Table 6.11, Table 6.12, Table 6.13 and Table 6.14. Analysis of this material has permitted the investigation of broader trends of pottery supply across the period, and of the chronological development relative to site area.

Ceramic Phase 1 (mid-1st c. AD to the early 2nd c. AD)

Romano-British Ceramic Phase 1 relates to the later 1st century AD and comprises 1488 sherds of pottery, weighing 22,602g, 12.63% of the Romano-British sherds recovered. The assemblage represents a minimum of 12 vessels.

Native style wares that continued into the Romano-British period at Lyde Green are represented by Ware group LI: handmade calcareous wares. The pottery in this grouping represents a pre-Roman tradition known to continue into the second half of the 1st century AD. Most sherds are poorly preserved, the calcareous inclusions at least partially leached away as the result of the burial environment, a factor making confident attribution difficult. A handful of sherds in a fabric containing argillaceous (mudstone?) inclusions probably represents a similar tradition. These wares appear to have a relatively local origin with utilisation of carboniferous era limestones running from the Mendips north to Bristol, being likely for most fabrics in this group. These wares appear to bear out the conclusion that native hand-made wares continued being produced and consumed locally into the later 1st century AD (see R. Young's report in this volume Section 6.1).

Table 6.9 Pottery attributed to ceramic phases 1-3 by ware group. The quantities given are sherd count, weight and rim EVEs

	CP1 (Early Roman)			CP2 (Middle Roman)			CP3 (Late Roman)		
Ware Gp.	**Ct.**	**Wt.(g)**	**EVEs**	**Ct.**	**Wt.(g)**	**EVEs**	**Ct.**	**Wt.(g)**	**EVEs**
LI	156	1314	0.98	93	563	1.14	24	262	0.61
GR	95	2082	0.67	202	3228	1.75	65	867	0.97
REDM	103	1399	0.65	1084	12,943	11.07	1115	17,348	19.02
GW	87	854	0.68	782	9690	10.78	620	7733	9.18
GWG	60	3795	0.67	94	2492	0.54	17	325	0
BL	451	2986	4.32	975	7436	10.39	440	4275	5.10
OX	9	121	0.22	187	1153	2.85	375	2688	3.67
CC	-	-	-	21	104	0.57	5	17	0
GL	-	-	-	2	6	0	-	-	-
WH	-	-	-	8	70	0.35	5	26	0
WS	-	-	-	10	85	0	11	117	0.12
SVW	449	7659	2.85	412	5345	3.85	167	2162	0.87
SAVGT	33	1716	0.27	9	182	0.22	4	27	0
SOWWS	1	3	0	103	555	2.0	6	16	0
BB1	10	116	0.33	1356	14,729	16.00	1546	16,563	22.48
ROBSH	-	-	-	-	-	-	3	13	0.14
ALH RE	-	-	-	-	-	-	3	257	0.31
OXFRS	-	-	-	1	4	0	141	1582	3.81
OXFPA	-	-	-	-	-	-	5	115	0.13
NFOR	-	-	-	1	1	0	45	439	0.50
LNV	-	-	-	-	-	-	2	2	0
SWWSm	-	-	-	13	367	0.83	4	243	0.29
OXFWHm	-	-	-	5	154	0.08	19	836	0.92
OXFRSm	-	-	-	-	-	-	23	362	0.41
RHIM	-	-	-	1	117	0.10	-	-	-
SAM	8	22	0.16	160	2519	4.00	83	724	1.09
CNGBS	-	-	-	4	36	0.03	1	3	0
MOSBS	-	-	-	-	-	-	3	10	0.22
BAT AM	26	535	0	20	1988	0	10	202	0
GAL AM	-	-	-	-	-	-	8	144	0
Totals	**1488**	**22,602**	**11.80**	**5543**	**63,737**	**66.55**	**4750**	**57,358**	**69.84**

The two most frequently encountered wares from Romano-British Ceramic Phase 1 were Severn Valley Ware (SVW) and wheelthrown black-firing fabrics (BL), both accounting for around 30% of the total Romano-British Ceramic Phase 1 assemblage. Early production of Severn Valley Ware is not well understood. The distinctive charcoal-tempered sub-type, mainly present as reduced-fired vessels (SVW REo), certainly represents an early variant present from Gloucester and other sites from 1st and 2nd century contexts (Timby 1990: 250). The attribution of buff-firing grog-tempered fabrics (SVW GR1-2) within the Severn Valley ware umbrella is less certain. These occur primarily from deposits dated to the mid- or later 1st century in Area D and occur primarily as jars (Figure 6.3, nos. 11-15 & 20). The fabrics share some characteristics with the early Severn Valley wares of similar dating recognised from Gloucester and other sites (*ibid.*). The forms, however, do not sit comfortably with the Severn Valley ware series and it is tempting to see this material as a local variant combining elements of the Severn Valley ware and south-eastern British grog-tempered ware traditions.

Table 6.10 The Early Roman pottery (Ceramic phase 1: mid-1st c. to early 2nd c. AD)

Ware group	Count	Weight (g)	EVEs
LI	156	1314	0.98
GR	95	2082	0.67
REDM	103	1399	0.65
GW	87	854	0.68
GWG	60	3795	0.67
BL	451	2986	4.32
OX	9	121	0.22
SVW	449	7659	2.85
SAVGT	33	1716	0.27
SOWWS	1	3	0
BB1	10	116	0.33
SAM	8	22	0.16
BATAM	26	535	0
Totals	**1488**	**22,602**	**11.80**

Wheelthrown black-fired fabrics (principally type BL1) are a persistent presence among the Romano-British Ceramic Phase 1 groups from Area D. Forms comprise mainly necked/shouldered bowls (Figure 6.3 nos. 6-7 & 17). The tradition of black-firing coarsewares continues into Ceramic Phases 2 and 3 within the Lyde Green assemblage.

Pottery representative of the earliest Roman activity comprises only a small portion of the total (Table 6.9). Although material of the period was recorded from each of the main excavation areas, three quarters relates to Areas C and D, with the earliest sizeable and cohesive context groups being associated with the D-shaped enclosure ditch [1005] in Area D. Finewares are largely absent from the earliest groups, limited to eight sherds of South Gaulish Samian. There is limited evidence for the appearance of Samian at the site before *c.* AD 70, with the few identifiable forms (Drag. 18, 27 and 37) all being Flavian or Flavian/Trajanic. Amphorae types are surprisingly common (BAT AM: 26 sherds) and hint at some use of 'Roman' commodities in this period.

The handful of south Gaulish sherds from the kiln site at La Graufesenque probably date to the last third of the 1st century AD (forms 18 and 27). The single vessel from Montans (Monteil, Appendix 3, Cat. D1) was produced during the reign of Trajan or Hadrian. The bulk of the remainder comprises products of the main export period at Lezoux, Central Gaul, all dateable to the 2nd century AD.

Pottery from what appears to be the focus of activity of this period, Area D enclosure [1005], is summarised in Table 6.11 and the significant elements are illustrated (Figure 6.3, nos. 1-8). This group appears reflective of pottery supply in the earliest Roman period, and

Table 6.11 Pottery from enclosure ditch [1005] in Area D, representative of Ceramic phase 1 (mid-1st c. AD to early 2nd c. AD)

Ware group	Count	Weight (g)	EVEs
LI	28	146	0.15
GR	30	378	0.32
REDM	21	49	0.45
GWG	3	31	-
GW	85	418	0.61
BL	367	2124	1.93
OX	11	69	0.10
BB1	24	137	0.31
SVW	322	4540	1.84
SAVGT	11	189	0.11
SAM	4	24	0.20
BATAM	26	226	-
Totals	**912**	**8331**	**6.02**

probably before *c.* AD 80/100. A few elements, including the Southeast Dorset Black-burnished ware, are later.

The large bulk of pottery coarsewares in use in this period are from sources that were relatively local to the site. The handmade limestone-tempered types (10.5% by count; Figure 6.3; nos. 1, 4 & 19) and wheelthrown grog-tempered wares (6.4%) attest to some activity at its latest from the middle decades of the 1st century AD, before *c.* AD 70/80. The main coarseware elements, including Severn Valley ware (30% by count) and black-firing sandy wares (30% by count) might be comparably early, although dating may extend into the late 1st century or a little later. Vessel forms among early context groups are heavily jar-dominated (75.2% of EVEs total), including some large forms suited to storage (Figure 6.3 no. 5, 10 and 14). Finewares and specialist types (mortaria, flagons) are absent, although there are a small number of bowls and platters (Figure 6.3 nos. 6-7 & 17), probably used at the table.

Vessel forms that are in locally produced, hand-made limestone-tempered fabrics within the assemblage comprise neck-less/bead-rimmed jars (Figure 6.3 nos. 1 & 19), which compare to styles common from mid-1st century groups at Sea Mills (Bennett 1985; Timby 1987) and Henbury (McSloy 2006: Fig. 13). There are in addition a few sherds in forms more typical of pottery made in the Malverns (Peacock 1968) and extensively traded in the mid and later 1st century AD (Figure 6.3 no. 4).

The wheelthrown black-firing fabrics are similar to material known elsewhere from southern Gloucestershire and north and north-western Wiltshire. The presence of similar wares at Bagendon (Clifford 1961) and in early military contexts at Cirencester (Rigby 1982b: TF5), indicates use before *c.* 60/70 AD,

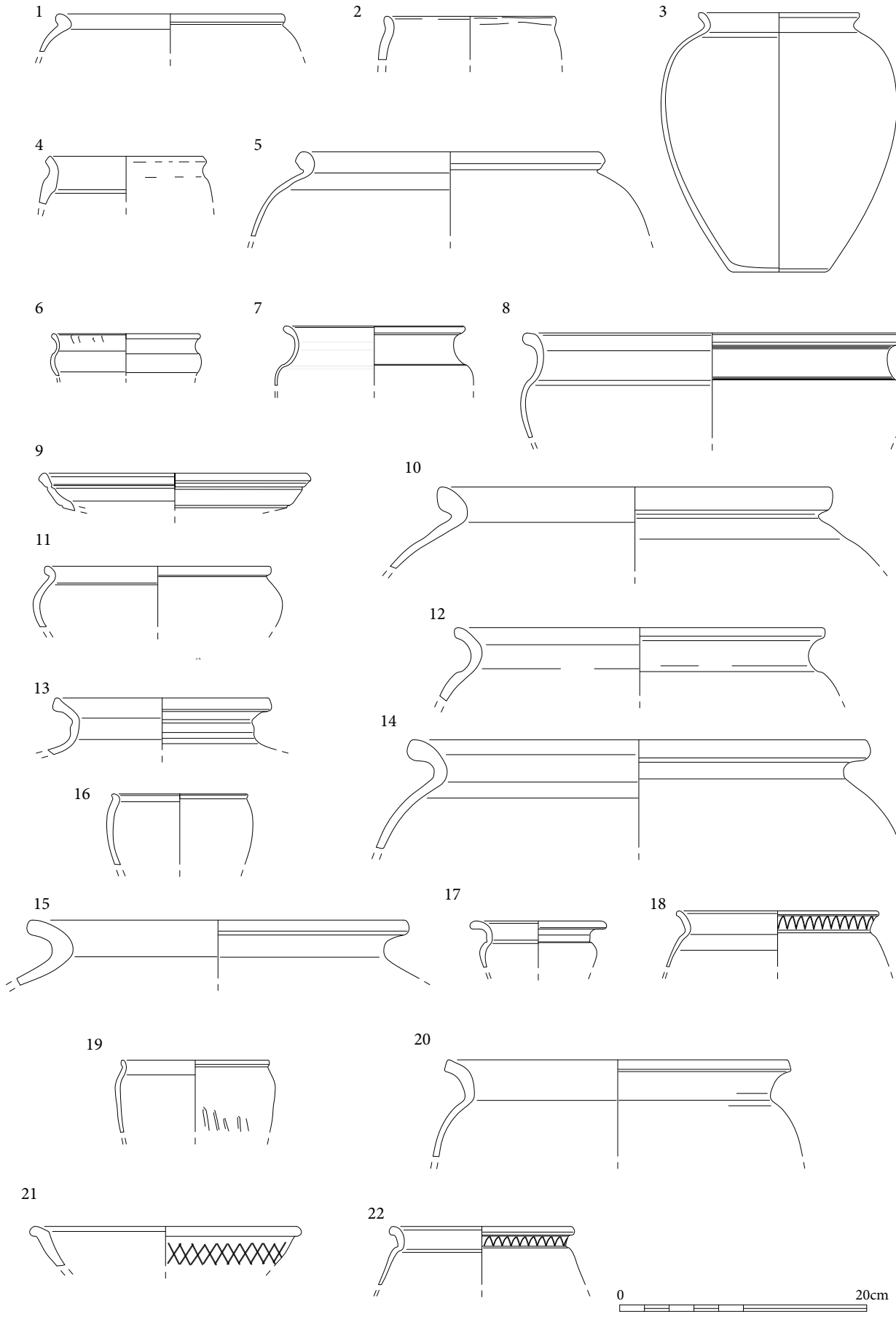


Figure 6.3 Profile illustrations of Early Roman pottery

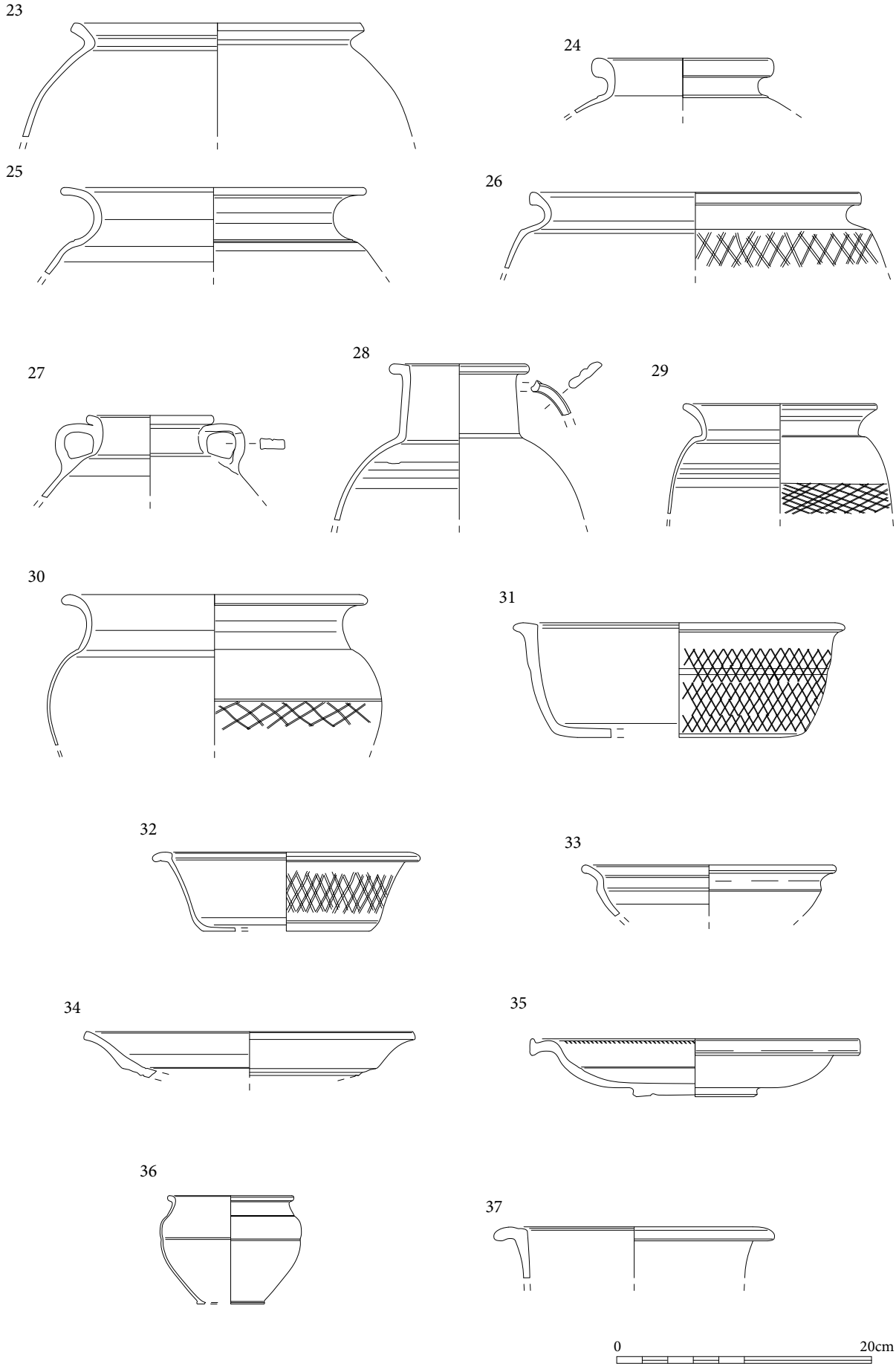


Figure 6.4 Profile illustrations of the Early-mid Roman pottery (1)

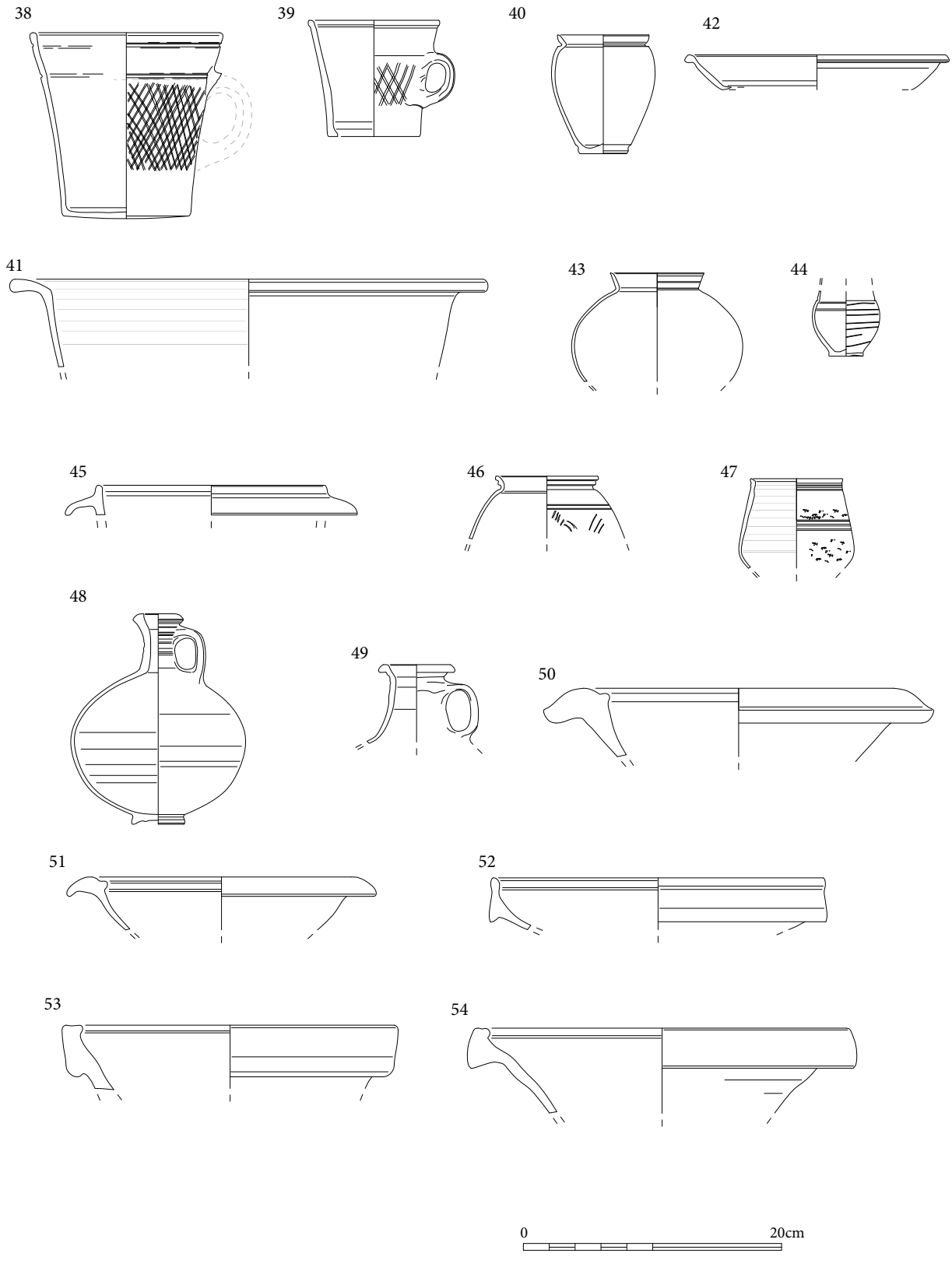


Figure 6.5 Profile illustrations of the Early-mid Roman pottery (2)

although at Cirencester the type continues well into the 2nd century. Kilns producing this material have recently been excavated near Westbury, Wiltshire (Corney *et al.* 2014). Wheelthrown black-firing fabrics seem then to be part of a regional pottery making tradition, local to Lyde Green. In combination with the locally hand-made limestone-tempered wares, locally made wheelthrown grog tempered wares and possibly locally made pottery combining elements of the Severn Valley ware and south-eastern British grog-tempered ware traditions, it seems the majority of later 1st century Romano-British pottery was largely locally produced.

At the end of this period a change in pottery supply can be demonstrated. The coarseware tradition of handmade native wares, grogged types and oxidised Severn Valley wares had been supplanted by the middle or later decades of the 2nd century by reduced coarsewares derived from local and regional sources.

Ceramic Phase 2 (mid-2nd c. to mid-3rd c. AD)

Pottery characteristic of this period represents a significantly larger group compared to earlier material (Table 6.9). It is also widespread, recorded from each of the excavation areas, although most abundantly in Area C. The largest single group (425 sherds) was however recorded from Area D (phase 3, pit 1489) and its composition is shown in Table 6.12. Elsewhere the largest context groups are from Area C: ditches 2296, 2155 and 2444 (169–184 sherds). Two groups of cremation burials from Area B (Figure 6.2, nos. 83-89), most comprising single coarseware vessels serving as receptacles for the cremated remains, belong within this ceramic phase. Most are Southeast Dorset Black-burnished ware jars of earlier style (before *c.* AD 200/220), with shorter, upright rims and acute-angled lattice decoration B (Figure 6.2, nos. 83-85). The partially reconstructed urn from cremation number 10 is a GWA1 jar form with an everted rim, imitating a BB1 cooking pot (Plate 5.16). It has acute-angled burnished lattice and has been adapted, post-firing, to be used as a strainer(?), with five perforations to its base and three to its lower wall.

Comparison with Ceramic Phase 1 illustrates significant changes in supply, some of which are reflective of broader patterns seen in southern Britain or province-wide, and others which are more localised. Whilst not abundant among Middle Roman 'exemplar' groups (2.8% by sherd count), Gaulish Samian is now routinely present in this period and can provide usefully precise dating. Its increased presence follows from a shift in the supply of Samian to Britain from Southern to Central and Eastern Gaul, which results in markedly increased quantity in the majority of Romano-British sites. Although a few

Table 6.12 Pottery assemblage from pit [1489] in Area D, representative of Ceramic Phase 2 (mid-2nd c. to mid-3rd c. AD)

Ware group	Count	Weight (g)	EVEs
LI	-	-	-
GR	11	153	-
REDM	86	847	0.35
GWG	-	-	-
GW	107	2394	1.23
BL	125	2149	0.24
OX	9	39	-
CC	4	9	0.15
WS	1	2	-
BB1	19	229	0.47
SVW	22	118	0.22
SAVGT	-	-	-
SOWWS	27	213	1.0-
SOWWSm	1	65	0.12
SAM	13	90	0.15
BATAM	-	-	-
Totals	**425**	**6308**	**3.93**

Hadrianic/early Antonine vessels are present among the plain and decorated material (Monteil, Appendix 3, Cat. D4), the majority dates to the period after *c.* AD 150/160. This is reflected both in the abundance of plain forms of this period (Drag. 31, 31R, 38, 79, 45) and by the identified potters, all of whom are Antonine or Late Antonine. The east Gaulish component (34 sherds) is dated to after *c.* AD 140, with some material potentially arriving at the site in the first half or the 3rd century. The Samian from this period comprises mainly central Gaulish (Lezoux) products, with fewer from eastern Gaul, mainly Antonine plain forms.

Non-sigillata continental types are present, a few sherds of Gaulish black-slipped ware, Rhennish mortarium type RHIM (Figure 6.5, no. 54) and Baetican amphorae. British finewares are represented in the form of colour-coated wares, probably of north Wiltshire type (Figure 6.5, nos. 46-47). The few forms among the colour-coated wares are bag-shaped beakers, some with clay roughcasting and all probably of the later 2nd or early 3rd centuries AD.

A second province-wide development, which impacted in a more fundamental way the pottery supply to the site, at this time was the growth, from *c.* AD 120, of the southeast Dorset Black-burnished ware (BB1) industry. The result of this expansion is seen very clearly in groups attributed to Ceramic Phase 2, with BB1 making up 28.5% of the total (by sherd count), jars and coarseware dishes/bowls (Figure 6.3, nos. 18, 21-22 & Figure 6.7 no. 64).

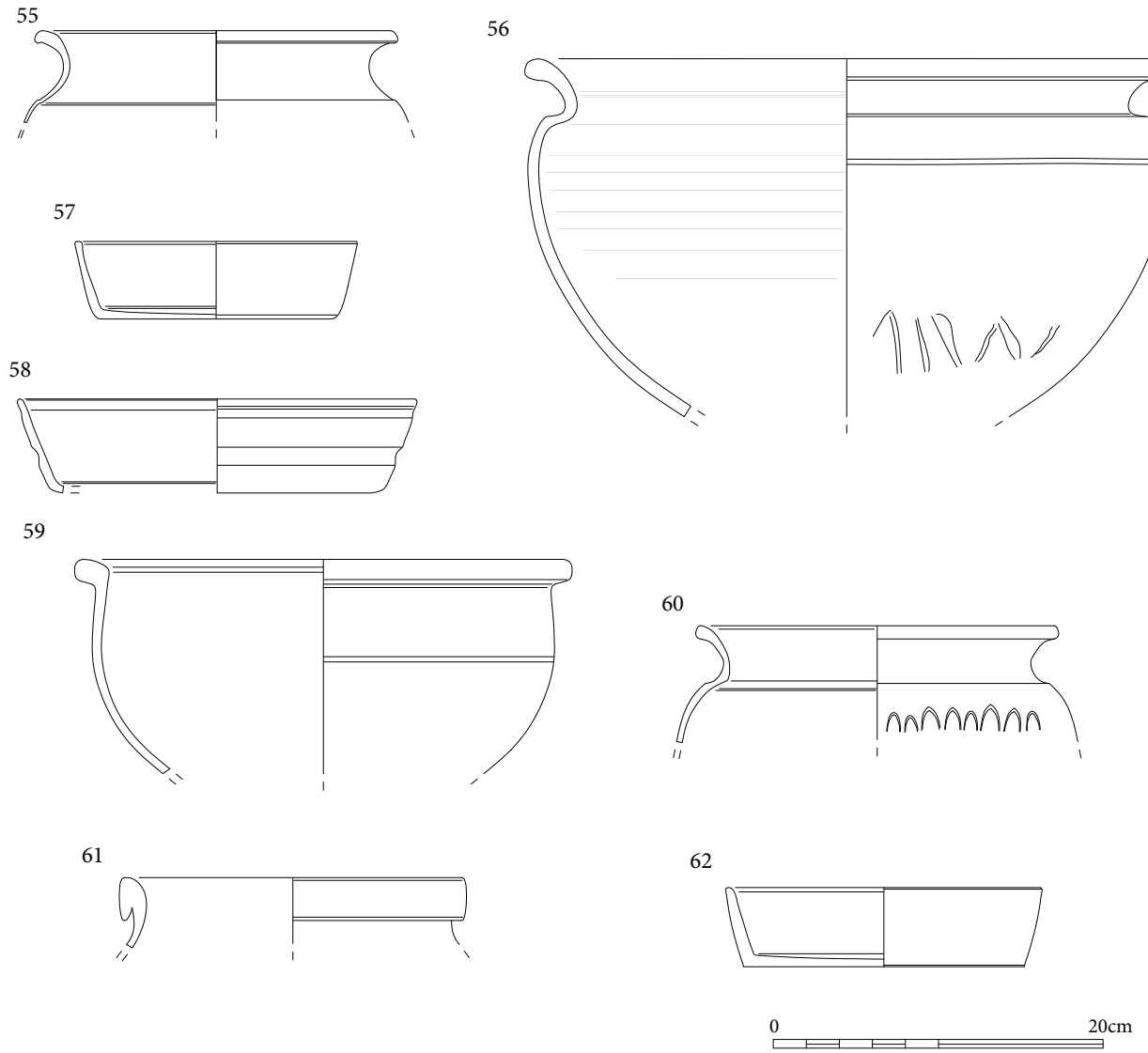


Figure 6.6 Profile illustrations of the Mid-late Roman pottery

Reduced coarsewares from local sources and, probably, North Wiltshire (fabric groups GW, BL, REDM, GWG and SAV GT), are a significantly larger presence in Ceramic Phase 2, making up 53.1% of the total by sherd count total. Their abundance appears to be largely at the expense of Severn valley ware. This type now accounts for only 7.4% (by sherd count), although characterised now by an expanded range of forms including tankards and dishes/bowls (Figure 6.6 nos. 41-42, 45). It is clear that black-firing (BL) and grogged greywares (GWG), both of mainly north Wiltshire origin, continued to be important wares in use in this period. The black-firing wares also appear in new forms compared with CP1, including jars and dishes imitative of Black-burnished forms. A major fabric type, clearly with its origins in this period, is the local micaceous greyware (REDM). This type is the most common greyware type from among Middle Roman groups (19.5% of the CP2 total by count).

Dating contemporaneous with Black-burnished wares of the mid/later 2nd century is suggested by vessels copying BB1 jars and dishes of this period (Figure 6.4, no. 32 & Figure 6.5, no. 41). Overall, the reduced coarsewares overwhelmingly comprise jar forms (Figure 6.4, nos. 24-30), with far smaller numbers of dishes/bowls (Figure 6.4, nos. 31-36) and tankards (Figure 6.5, nos. 38-39). The latter are faithful copies of Severn Valley ware forms and almost certainly produced by north Wiltshire potters, seemingly in competition with the originators of the style. The influence of the expanding BB1 industry is clearly apparent on local coarsewares, both on vessel morphology and the use of burnished lattice decoration.

The Middle Roman groups remain jar-dominated (58.1% of total EVEs), although to a notably lesser extent than the earlier division. Bowls/dishes (23%) mainly comprise utilitarian classes, although fineware forms occur mainly from among the Samian (3.11 EVEs or 5.1%). Drinking vessels are reasonably well-represented (10.9% of EVEs total) by a mix of Samian cups (0.92 EVES), beakers in fine greyware, Samian

and colour-coated wares (2.33 EVEs: Figure 6.5, nos. 46-47) and tankards in Severn Valley ware or sandy greywares/oxidised wares (3.31 EVEs: Figure 6.5, nos. 38-39). Flagons occur in the form of 'devolved' ring-necked forms in white-slipped fabrics (Figure 6.5, nos. 48-49). Their seeming prominence (3.24 EVEs or 5.4%) may largely be as the result of vessels preserving the full rim circumference.

For the first time mortaria occur, although in small numbers (1.4% of EVEs) total, supplied from local (SWWS: Figure 6.5, nos. 50-52), Oxfordshire and continental sources (Figure 6.5, no. 54). The Middle Roman period is also marked by an expansion in the vessel forms now in use, the increased presence of greywares appears to be at the expense of Severn Valley wares, which accounts for only 6% of the Ceramic Phase 2 total.

Ceramic Phase 3 (late 3rd century to late 4th/early 5th century AD)

Pottery of the latest Roman Ceramic Phase occurs in slightly reduced quantities compared to Ceramic Phase 2 (Table 6.9). Again, the largest quantities are from excavation areas B and C, with only a small group (*c.* 300 sherds) from Excavation Area D. The largest context groups of this period (113–304 sherds) are from interventions across ditch [2476] in Area C, and a gully which cut into it [2254]. The largest groups from Area B (130-138 sherds) are from layers/spreads 3881, 3442 and 3209, and there are smaller quantities from construction or use/disuse deposits, which relate to the villa and its ancillary buildings. These include the fill of a foundation trench 6039, a floor 6176, and 3758, a deposit sealing the possible bathhouse.

The composition of Ceramic Phase 3 groups (Table 6.9 & Table 6.14) indicates that the pattern of supply established in the Middle Roman period continues, with 'local' reduced wares and Black-burnished wares continuing as the dominant coarsewares. Among these, only the grog-tempered greywares (GWG) are significantly reduced in representation (<1% by sherd count) and almost certainly are residual in this period. Also, significantly less abundant, and suggestive of a fall-off in use in this period, is the Gaulish Samian, Southwest, white-slipped wares, and, most-markedly, the Severn Valley wares.

The Black-burnished ware of this period is typical of late assemblages, being composed of jars, plain-rim dishes, conical flanged bowls, and the occasional oval 'fish dish' (Figure 6.7, no. 63). The reduced coarsewares continue to be dominated by jar and utilitarian open forms, now incorporating wide-mouthed 'bowl-jars' (Figure 6.6, no. 56) and with dishes/bowls mainly resembling those of the late BB1 suite. Plain-rim dishes (Figure 6.6, nos. 57-58) and some bowls imitated those produced by the late Black-burnished ware potters (Figure 6.7, no. 66).

The similarity and continued utilitarian focus of the 'Middle' and 'Late' Roman assemblages can be demonstrated by the breakdown of vessel forms (Table 6.15); the representation of jars is closely comparable (56.3% by EVEs total) and there are some new decorative styles, including frilled or finger-impressed jar rims (Figure 6.7, nos. 67-68). Changes, such as the scarcity of tankards, result from the further declining presence (and influence) of Severn Valley ware. Drinking vessels of any type are, however, less common (3.9% of EVEs total) compared to the Middle Roman assemblage. This perhaps indicates that other materials (wood, metal or glass) were preferred. Beakers are the most common form, supplied mainly from production sites in the New Forrest and in Oxfordshire, but also including examples in Lower Nene Valley Colour-coated ware and local greywares.

Among the few differences relating to form and function between Ceramic Phase 2 and 3 is the increase in mortaria, which are significantly more abundant in Ceramic Phase 3 (2.3% of EVEs total). These are now largely made up of Oxfordshire products. The extent to which this is was the result of the greater availability of such vessels, brought about by larger-scale production rather than wider adoption of 'Roman' food preparation practices, is unclear.

The decline and eventual ceasing of Samian importation by the mid-3rd century is reflected in the marked decrease in Samian representation in Ceramic Phase 3 (1.7% of the total). The lack of availability of such high-quality wares it appears was more than compensated for by a surge in production of regional Romano-British fineware manufacturers. This is reflected in the Lyde Green assemblage by the abundance of such types (4.1% by sherd count). Most common among these regional finewares are the red-slipped Oxfordshire products (OXFRS), but New Forest colour-coated/slipped wares (NFOR) and Lower Nene Valley colour-coated ware (LNV) are also present. The abundance of the Oxfordshire types implies dating after *c.* AD 270. Most forms represented are bowl classes (C45, C47, C51) in use across the AD 240/70 to AD 400+ production/export range (Young 1977). A small number of bowls, including illustrated vessel no. 74 (Figure 6.7), belong to classes in production after AD 350. The relative scarcity of forms with rosette-stamped or painted decoration does, however, hint at restricted activity in this period at the site. Some activity of the second half of the 4th century (or a little later) is also suggested by the few sherds of Late Roman shell-tempered ware (ROB SH).

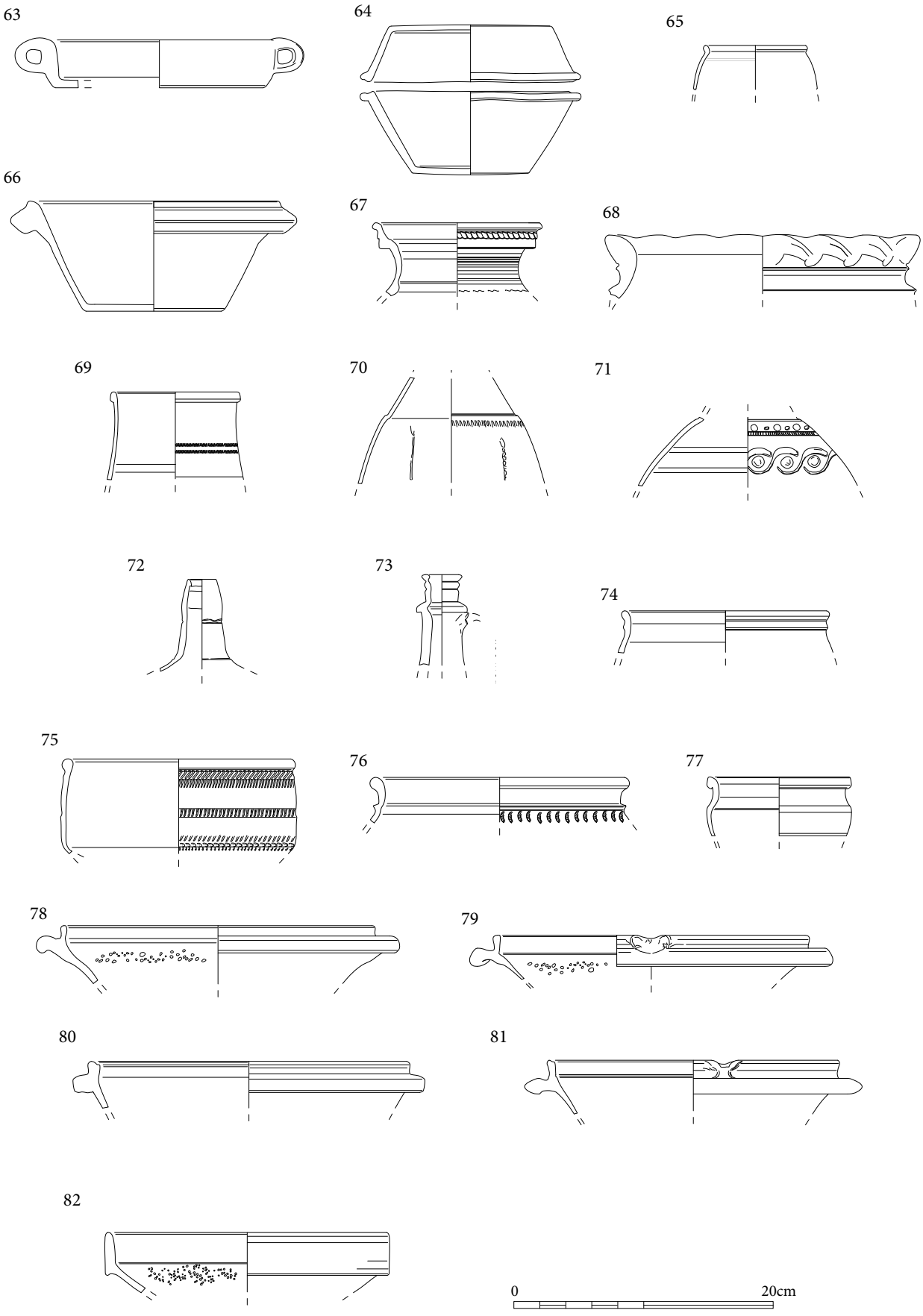


Figure 6.7 Profile illustrations of the Late Roman pottery

Table 6.13 Area C ditch [2296] and ditch [2444] (CP2) pottery summary

	Ditch [2296] (CP2)			Ditch [2444] (CP2)		
Ware Gp.	**Ct.**	**Wt.(g)**	**EVEs**	**Ct.**	**Wt.(g)**	**EVEs**
GR	12	319	0	1	7	0
REDM	87	961	0.71	41	536	0.18
GW	81	968	1.34	35	683	0.59
BL	29	358	0.38	9	56	0
OX	21	120	0.03	15	68	0.10
CC	3	35	0.30	-	-	-
WS	-	-		1	8	0
BB1	61	1208	2.21	40	407	0.39
SVW	3	40	0.15	16	288	0.05
SAVGT	-	-		1	1	0
SOWWS	5	10	0	-	-	-
SOWWSm	3	201	0.40	-	-	-
CNGBS	-	-	-	1	31	0
SAM	5	66	0	9	45	0.01
Totals	**310**	**4286**	**552**	**169**	**2130**	**1.32**

Table 6.14 Area C ditch [2254] and Area B layer 3881 (CP3) pottery summary

	Ditch [2254] (CP3)			Layer 3881 (CP2)		
Ware Gp.	**Ct.**	**Wt.(g)**	**EVEs**	**Ct.**	**Wt.(g)**	**EVEs**
GR	-	-	-	2	21	0
REDM	26	254	0.42	21	204	0.34
GW	19	221	0.27	15	118	0.10
GWG	-	-	-	1	25	0
BL	8	121	0.06	4	20	0
OX	15	46	0.12	15	128	0.31
WH	-	-	-	2	10	0
BB1	38	459	0.41	45	493	0.57
SVW	-	-	-	1	8	0
OXFRS	1	38	0.12	26	133	0.43
NFOR	1	6	0	3	10	0
OXFWHm	1	34	0.10	-	-	-
OXFRSm	1	19	0.07	1	12	0
SAM	3	50	0	2	12	0.06
Totals	**113**	**1248**	**1.57**	**138**	**1194**	**1.81**

Vessel form and function within the broader assemblage

The range of vessel forms is set out in Table 6.15. Jars suited to cooking or storage are heavily dominant (60% of the EVEs total), although with their prominence decreasing across time. Among 'open' classes, dishes and bowls predominate (27% of the EVEs total), with platters rare. Among the dishes and bowls only a small proportion (8.86 EVEs or 17%) occur in fineware fabrics – mainly Samian and later Romano-British types. The majority (29.42 EVEs or 57.5%) consist of utilitarian forms in or developed from the Black-burnished ware repertoire, with the single most common type, the plain-rimmed dish (13.56 EVEs or 26. 4% of the total). Forms associated with consumption of liquids (beakers, cups and tankards) are relatively uncommon, and largely limited to Ceramic Phases 2-3 (below).The 'popularity' of tankard and cup forms in Middle Roman groups is in proportion to the relative abundance of Severn Valley ware (or its influence) and Samian in this period. When measured by a proportion of the EVEs total, flagons are relatively well represented (7.01 EVEs or 3.8%). This measure is however somewhat misleading, elevated by the number of complete rim circumferences. When given as a percentage of identified rim sherd 'families' (representative of single vessels), flagons make up only 1% of the total. Mortaria (discussed further below) are poorly represented, in particular prior to the Late Roman period.

Table 6.15 Vessel forms summary by 'Ceramic Phase'

Form	**CP1**		**CP2**		**CP3**		**Total**			
(generic)	**EVEs**	**%**	**EVEs**	**%**	**EVEs**	**%**	**EVEs**	**%**	**No.V.**	**%**
flagon	-	-	3.24	5.4	1.15	2.3	**7.01**	**3.8**	**22**	**1**
bottle	-	-	-	-	-	-	**0.40**	<1	1	<1
beaker	0.10	<1	2.33	3.9	1.21	2.4	**4.74**	**2.6**	**66**	**3.1**
tankard	0.10	<1	3.31	5.5	0.44	<1	**4.52**	**2.4**	**57**	**2.7**
cup	-	-	0.92	1.5	0.31	<1	**1.79**	**1**	**26**	**1.3**
jar	8.87	75.2	35.00	58.7	28.16	56.4	**110.95**	**60**	**1163**	**55.9**
bowl	2.32	19.7	7.09	11.9	8.21	16.4	**26.60**	**14.4**	**359**	**17.3**
dish	0.17	1.4	6.65	11.2	8.73	17.5	**24.70**	**13.4**	**310**	**14.9**
platter	0.24	2	0.19	<1	0.05	<1	**0.61**	**<1**	**11**	**<1**
lid	-	-	0.07	<1	-	-	**0.20**	**<1**	**3**	**<1**
strainer	-	-	-	-	-	-	**-**		11	
mortarium	-	-	0.84	1.4	1.68	3.4	**3.41**	**1.8**	**50**	**2.4**
Totals	**11.80**	**-**	**59.64**	**-**	**49.94**		**184.93**	**-**	**2079**	**-**

Evidence for use in the form of visible carbonaceous or other residues was uncommon (756 sherds or 5.1%), perhaps in part as the result of poor surface survival. Unsurprisingly instances of carbonised and 'limey' residues were almost exclusively limited to coarsewares, and disproportionately to darker-firing ware groups BB1 and BL (539 sherds in total). Where identifiable, most vessels with carbonaceous residues are mainly jars, but include dishes and bowls. A possible vessel set or casserole is represented by portions of two Black-burnished ware vessels of closely-matching size, the 'lid' sitting snugly over the rim of bowl (Figure 6.7, no. 64).

Instances of post-firing adaptation were recorded on seven vessels, mainly as post-firing perforations to the bases of jar-profiled vessels. The presumed use for such vessels is as strainers, very few 'purpose-made' examples of which were recorded (Table 6.15).

Six vessels, all jar-proportioned, were utilised as cremation urns (Figure 6.2, nos. 83-89) and a further vessel was seemingly an accessory. Four from the six urns are southeast Dorset Black-burnished ware vessels. Although most evidence from the region comes from larger urban cemeteries such as Gloucester and Cirencester, the dominant tradition for the 2nd/3rd centuries appears consistent with that seen represented at Lyde Green; with single coarseware vessels functioning as urns, only occasionally accompanied by an accessory. The same apparent preference for Black-burnished ware vessels is demonstrated in the largest cremation burial group from the area at the western cemetery of Cirencester (McSloy 2017; Reece 1963).

Discussion/summary

This substantial Romano-British pottery assemblage demonstrates a long-running and unbroken period of activity in the areas investigated, from the mid-1st century AD through to the middle or later decades of the 4th century. The focus of early Roman activity in the mid-1st century AD was almost certainly within Excavation Area D.

Throughout the period of occupation, the pottery is utilitarian in character. The pottery used by the inhabitants was intended largely for kitchen purposes, for cooking, storage and food preparation. Finewares - vessels intended for the table or for display - constitute a small minority throughout the period of occupation. Amphorae and specialist forms, such as mortaria and flagons, are also poorly represented. To a very large degree this pattern corresponds with the dominant model of ceramic use for Romano-British rural sites of differing status in Roman Britain.

Changing pottery supply can be demonstrated over time, the most significant shift occurring during the transition from Ceramic Phases 1 to 2, in the mid-2nd century AD. One observes an earlier coarseware tradition of handmade native wares, grogged types and oxidised Severn Valley wares being supplanted by the middle or later decades of the 2nd century by reduced coarsewares, derived from local and regional sources. By contrast, an essentially unchanged pattern of coarseware supply would appear to persist across Ceramic Phases 2 to 3, with the significant differences in groups across these phases being apparent only among finewares/specialist wares. Although finewares became slightly more common in later Roman groups at Lyde Green (Ceramic Phase 3), there is no clear indication that this was a consequence of the increasing elevated status of the site. It was not an increase in status or prosperity which altered the nature of the traded ceramic supply. The relative abundance of late finewares, mostly products of the Oxfordshire kilns, with fewer from the New Forest, reflects a trend seen across much of Roman Britain at this time, resulting from mass production and efficient distribution.

The Lyde Green assemblage is one of a number excavated in recent decades from within the Bristol area. Unsurprisingly, the available published assemblages demonstrate compositional similarities. At all sites, including Lyde Green, Southeast Dorset Black-burnished ware forms a major component of the assemblages from the early to mid-2nd century AD onwards. Reduced coarsewares form the bulk of assemblages from most sites, although these are likely to have been supplied from variable 'local' sources. The sites at Lawrence Weston (Sabin in Boore 2000) and Inns Court (Burchill in Jackson 2007), in the northwest and southern suburbs of Bristol respectively, there is evidence that the kilns at Congresbury to south of Bristol were a significant supplier. There is no evidence, however, that this was the case at Lyde Green. None of the distinctive forms occur and the admittedly limited comparative thin-section analysis found no strong parallels (Appendix 4). The dominant 'local' coarseware tradition at Lyde Green comprises the micaceous greywares (Ware group REDM), common to sites in the Severn Vale, south of Gloucester. The Lyde Green group provides further evidence for the origins of this ware in the mid- or later 2nd century AD, and the thin-section analysis suggests a local source, probably to the east of Bristol.

6.3. Ceramic building material

By Philip Mills

Introduction: the composition of the assemblage

A policy of collecting all ceramic building material was followed during the excavations and this resulted in a total of 765 fragments of ceramic building material (CBM) weighing 36.98kg being recovered from 110 contexts in excavation areas A, B and C. Very little CBM was recovered from the remaining areas and what was found is not discussed within this report. The assemblage from areas A, B and C comprised 728 fragments of Roman CBM 33.85kg (CBM) and 37 fragments of medieval or later CBM weighing 3.13kg. Five 5 fragments of burnt clay (0.08kg) and a single fragment of mortar (0.13kg) were also included for analysis.

The stratified material comprised 545 fragments, weighing 31.11kg (excluding unstratified material from voided contexts, topsoil etc,), and an additional 84 fragments (0.04kg) collected during environmental sampling. The material from samples was recorded to fabric and scanned for interesting pieces but has not been used for the quantified analysis.

Material was recorded by context with fabric recorded using a fabric series defined for this project. Forms were identified where possible, with unidentified CBM recorded as B/T (Brick/Tile). Metrics recorded include the number of individual fragments, the weight in grams, the number of corners, and any complete dimensions (recorded in mm). The mean sherd weight (MSW) was calculated by the formula weight/count.

The material was considerably fragmented, making the function of a little more than 45% of it impossible to specify (Table 6.16). It is clear from the identifiable material, however, that there is a very low level of roof tile within the assemblage. In the small quantity of roof tile identified, normal imbrices are slightly more common than tegulae. The very low number of tegulae meant that only a single signature was present and there was a complete absence of observable cutaways. There is a low number of corners within the assemblage, which indicates a rather disturbed group. This also reflects the low amount of roof tile and the predominance of flue tile in the group, as flue tile corners are often underrepresented in CBM assemblages.

It could be argued that this very low level of roof tile may partially reflect taphonomy. Roof tile is more likely to be recycled as hard core than flue tile. However, such a low level of roof tile strongly suggests that the roofs of the villa complex and other substantial ancillary buildings were made mainly of stone tile and perhaps other perishable materials. This fact appears to be confirmed by the presence of a significant quantity of stone roof tile amongst the bulk finds. The lack of use of ceramic roof tile may well have been typical of late Roman construction in this region.

The most commonly identifiable CBM form was a Type 2 flue tile, indicating the existence of a hypocaust for heating walls and floors, clear evidence for which did not survive in situ. Also present in a more significant quantity than roof tile was drain cladding tile. These curved drain tiles are unusual. While they resemble imbrices, they are thinner and more semi-circular in profile than a standard imbrex. They seem to have been made especially for supporting lead pipes. Indeed, a short section of lead pipe was found (see Section 6.4). The pipe, SF 62, was photographed (Plate 6.3 & Figure 6.12) in situ in the wall of the bathhouse {4213}, clad in ceramic drain tiles. The pipe linked a possible

Table 6.16 Stratified CBM form classes

Function	No%	Wt%	Cnr%	No.	Wt.	Cnr.
Unidentified Brick/Tile	45.17%	13.04%	0.00%	248	4128	0
Brick	6.19%	9.34%	25.00%	34	2957	3
Curved	0.18%	0.15%	0.00%	1	46	0
Drain	6.74%	8.37%	16.67%	37	2649	2
Flat	0.18%	0.27%	0.00%	1	86	0
Flue tile	35.15%	55.78%	41.67%	193	17,657	5
Imbrex	0.55%	2.39%	0.00%	3	755	0
Other	0.18%	0.57%	0.00%	1	182	0
Pan tile	2.73%	5.68%	16.67%	15	1797	2
Ridge tile	1.09%	2.13%	0.00%	6	673	0
Tegula	0.36%	0.74%	0.00%	2	233	0
Tile	1.28%	1.54%	0.00%	7	488	0
Wall tile	0.18%	0.01%	0.00%	1	4	0
N =	**549**	**31.65 kg**	**12**			



Plate 6.2 Fragment of possible siphon

plunge pool or tank with a drainage channel situated between the bathhouse and well [3222]. This well was presumably used to supply water to the bathhouse. One unusual fragment of CBM, found in a north-south ditch in the centre-east of Area B, is identified here as a possible siphon, and may have been employed for this purpose (Plate 6.2).

Taphonomy

By both count and weight, more than 94% of the material came from excavation Area B, with slightly less than 1% being recovered from areas A and C. Most was found in ditches and gullies (38% by count). A further 30% of the material came from layers, the most significant of which were associated with the demolition and robbing of Romano-British structures. A large amount of material also came from the fills of the so-called plunge pool within structure {4213} (10% by count). In Area A all of the CBM came from ditches, while in Area C 97% of the material came from ditches and the rest from the stone-lined well.

Form and fabric of the Romano-British material

Eight different fabrics were identified within the assemblage. Four of these were in use during the Romano-British period and four during the medieval or Post-medieval period. Photographic sections of these, along with fabric descriptions are included as Appendix 5. For the Roman period, by far the most common fabric was T01 constituting 66.5% of the whole assemblage. This was followed by T11, which constituted 27.5% of the whole assemblage, with the other two Romano-British fabrics both constituting less than 1% of the assemblage as a whole. Table 6.17 shows the breakdown by fabric for the stratified CBM group

Fabric T01

This is a clean red to pale red fabric with moderate grog inclusions. It is the most common fabric at the site at 67% of the group by number of fragments.
Table 6.18 shows the proportion of different forms in fabric T01

Brick type 1 34-42mm thick. These dimensions are likely derived from pedalis of Lydion sized bricks

Brick type 2 50mm thick
These dimensions would derive from the larger brick types, such as a sesquipedalis or bipedalis

Table 6.17 CBM fabrics as a proportion of the whole assemblage

Period	Fabric	Count%	Weight%	Corners%	MSW
Romano-British	**T01**	66.5%	60.5%	50.0%	52.46
Romano-British	**T02**	0.2%	0.6%		187.00
Romano-British	**T11**	27.5%	29.2%	33.3%	61.14
Romano-British	**T12**	0.5%	0.4%		42.00
Medieval/ Post-medieval	**TZ01**	0.2%	0.0%		4.00
Medieval/ Post-medieval	**TZ11**	1.5%	4.2%	16.7%	165.00
Medieval/ Post-medieval	**TZ12**	0.4%	0.9%		141.00
Medieval/ Post-medieval	**TZ21**	3.3%	4.3%		75.33
	n=/avg.	**549**	**31,65 kg**	**12**	**57.66**

Table 6.18 CBM forms in fabric T01

Form	Type	No	Wt	Cnr
Unidentified Brick/Tile		58.2%	11.1%	
Brick		2.6%	2.4%	
	1	1.8%	6.4%	
	2	0.2%	2.5%	
curved		0.2%	0.2%	
Flue tile	1	0.6%	0.2%	
	2	32.7%	6.2%	100%
	BFT	0.4%	3.2%	
	HBFT	0.4%	2.0%	
Imbrex	1	1.0%	3.5%	
Drain		1.0%	3.4%	
Tegula		0.2%	0.3%	
Other		0.2%	0.8%	
n =		**493**	**22.78 kg**	**3**

Curved
This was coded for fragments that could derive from imbrex or the rounded edge of a flue tile

Flue tile 1 flue tile with a thickness between 9 and 16mm

Flue tile 2 flue tile with thickness 17 – 22mm

BFT – box flue tile, with walls *c.* 20mm thick, one example with a circular vent hole

HBFT – half box flue tile, with *c.* 20mm thick walls

Imbrex type 1
This is the normal size of imbrex found in Britain, with a thickness of *c.* 21-23mm and a profile width of 135mm from foot to foot.

Drain tile
The drain tiles were formed as more semi-circular imbrices *c.* 16mm thick, smaller than normal imbrex. Many examples were well finished, possibly with a light slip. Some examples had smoothed undersides, which is unusual for an imbrex and suggests that these were produced specifically for drain lining rather than being repurposed roofing materials.

Other
This was a 40mm thick U-shaped piece, with smoother internal rounded face. It is possibly from a siphon. There is an X graffito (?) on the inner surface.

Tegula There was one example of a possible tegula fragment in this fabric.

Fabric T02

There was a fragment of brick, 36mm thick, noted in this fabric

Fabric T11

This is a sandy variant of T01. The form types identified in this fabric are shown in Table 6.19.

Table 6.19 CBM forms in fabric T11

Form	Type	No	Wt	Cnr
Unidentified Brick/Tile		35.5%	19.3%	
Brick		2.0%	0.8%	
Flue Tile	1	0.7%	0.5%	
	2	36.2%	31.8%	50%
Drain	2	25.0%	20.5%	50%
Tegula		0.7%	1.9%	
n =		**152**	**9.09 kg**	**4**

Brick
No complete thicknesses were noted in this fabric

Flue tile 1 10-16mm thick walls

Flue tile 2 19-22mm thick walls

Drain
These were the same as the type in T01, with a wall thickness *c.* 15mm. One example had a profile width of 100mm

Tegula
There was a single tegula fragment in this fabric with a semicircle signature

Fabric T12

This comprised a flue tile fragment, 15mm thick, a drain with 13mm thick walls, a flat fragment with a white mortar layer and an unidentified fragment.

Medieval or Post-medieval fabrics

Fabric TZ01 - This comprised a single fragment of a white glazed wall tile

Fabric TZ11 - This included fragments of hip tile, pan tile and plain tile

Fabric TZ12 - This comprised fragments of pan tile and plain tile.

Fabric TZ21 - This comprised fragments of pan tile plain tile and a possible ridge tile (or horseshoe field drain).

Markings, graffiti and other distinguishing features

There were two examples of graffiti, an 'x' on the possible siphon fragment and a 5x5 grid or lattice forming squares of *c.* 8mm diameter incised into a tile. The latter probably occurred after firing. Seven percent of the stratified group showed evidence of sooting or burning. This included 6% of the brick and 3% of the flue tile. This is in line with what would be expected from material from a regularly used heating system. Three percent of the brick, 6% of the flue tile and 14% of the Post-medieval tile had evidence of applied mortar. The figures for the Roman period are in line with the normal range for mortared material within a structure. There is one fragment of mortar which would have been used for a normal sized imbrex. For the post medieval material, higher levels of mortaring suggest material deriving from later structures.

There is some evidence (Mills forthcoming) that flue tile comb keys may have a chronological significance and are potentially useful for understanding how

Table 6.20 Number of different key classes on flue tile

Key class	Type	No.
1	8 teeth	9
2	7 teeth	31
3	6 Teeth	9
4	medium tooth 5+	87
5	5 Teeth	9
6	4 teeth	8
7	3 Teeth	1
0	incised	1
11	11 teeth	1
Graffiti	-	1
Plain	-	97

tile manufacturing was managed, based on the range of comb types used. The fragmentary nature of the group from Lyde Green, and the effect of differential shrinking on the keys, made the grouping of key types problematic. An attempt at categorisation has been made here, based mainly on the number of teeth on the combs used (Table 6.20). Around 40% of the group had no evidence of a key pattern, indicating a relatively high percentage of keyed surfaces amongst the flue tile.

Key 1: 8-tooth comb
This key class was produced with an 8-tooth comb with the width of the key ranging from 24-30mm. There are four examples of a cross key pattern and one example of a slightly wavy diagonal line.

Key 2: 7-tooth comb
This was produced with a 7-tooth comb with comb widths ranging from 25-30mm. There are nine examples of cross comb, one example of a border key, three examples of definite diagonal combing, one example of a border and cross comb, one example of a wavy key, one example of three overlapping comb marks, and one with three comb marks with two overlapping.

Key 3: 6-tooth comb
This key was produced using a 6-tooth comb with a width of 24-36mm. There was one example of a diagonal key, two cross and border keys, one example of a Z motif, one example with a cross key and additional line, and two examples of wavy line keying.

Key 4: uncertain number of teeth
This class was defined for combs with over five teeth, most probably derived from key class 2. There were 22 cross key examples, two examples of diagonal keying, ten examples of border and diagonal line, two examples of border and cross design, one example of an H key, and one example of two parallel comb mark keys.

Key 5: 5-tooth comb
These were formed by a 5-tooth comb with width 20 – 23mm. There were two examples of cross key fragments, three fragment of border and cross, two examples with overlapping comb marks, and one example of a comb with a prominent outer tooth.

Key 6: 4-tooth comb
This was formed by a 4-tooth comb 27-33mm wide. This included one example of a border key, four examples of a border and diagonal key, one example of a border and diamond with a central line comb, one example with three comb mark fragments, one example of a circular key, one example of a straight border and additional wavy line key and a border key with an inner comb mark.

Key 7: 3-tooth comb
This was formed by three teeth on a comb 8mm wide.

Key 11: 11-tooth comb
This was formed using an 11-tooth comb, 36mm wide, with two comb marks.

Key 0: incised lines
This was formed by hand made parallel incised lines along the edge of the tile

Discussion

This is a group of mainly Roman CBM from outside Bristol. Most of the material is related to the heating system for a bathhouse and composed some bricks as well as flue tile with many keyed examples noted. Sooting and mortaring levels are in line with what would be expected for a regularly used hypocaust. The absence of the types of bricks associated with pilae stacks may imply that such a structure was not present, although hypocaust supports can be made from stone or other types of ceramic material. Pilae stacks also tend to be found in situ, or collapsed in their original setting, and so can be quite rare in a bathhouse related group, unless the hypocaust structure is located. Some of the bricks recorded may derive from a hypocaust floor, as their use in walls is uncommon outside of military or urban sites. There was evidence for at least two sizes of flue tile, based on wall thickness as well as the use of half box and full box flue tile.

There is an unusually low number of roof tiles from the group, suggesting that the villa structure was roofed mainly in stone. An unusual roofing for the bath, such as being open or domed, cannot be ruled out. There are a number of drain covers, which were formed like smaller imbrex, but generally had a better finish.

There is an unusual brick type, which may have been part of a siphon. These are rarely reported in Britain, but if the identification is correct this does suggest

the presence of an unusually sophisticated water management system. Comparison with other villa sites in the region is problematic due to unsympathetic collection policies often applied to CBM in the past. The lack of any evidence for a ceramic roof is unusual, as is the presence of the circular drain capping tiles.

The medieval and Post-medieval material is typical of a rural scatter of that period.

6.4. Small finds

By Richard Henry

Introduction

The small finds from Lyde Green broadly fit the composition of many assemblages from villas in the region including: a range of artefacts of personal adornment such as brooches, bracelets and hair pins, household equipment, textile manufacture including spindle whorls and tools. Interestingly, within the Tools category are five sets of iron shears. Of the 459 objects recorded under 298 separate small finds numbers given during the excavations at Lyde Green 450 are Roman in date, 9 are probably medieval to modern in date. The artefacts have been grouped into functional categories defined by Crummy (1983). Select artefacts have been described in detail under various categories, others have been grouped to form a wider analysis, such as the iron nails. A number of objects, which were unstratified and which lack parallels from securely dated contexts at other excavated sites, can only be broadly dated to the Roman period. The earliest diagnostic item, a brooch known to have been produced around AD 43, dates a few decades earlier than the first datable imports of Samian ware to the site. Late Roman objects include the spindle whorls constructed from shale and reused Samian ware, as well as perhaps bracelets (given the ratio between the cable bracelets and the light bangles). Such finds, when considered with the evidence of two House of Theodosian nummi (AD 388-395), indicate that the site had continued access to late Roman material culture. This provides evidence of trade links and also continuing access to the monetary economy, perhaps highlighting use of the site in some form into the 5th century.

Items of personal adornment

Forty-seven items of personal adornment were recovered, including 20 brooches, 12 bracelets, nine beads, four hair pins and two finger rings. A finger ring key, which is discussed in the section on Household Equipment below, and 180 hobnails were also recorded from the site. The assemblage in general reflects the changing pattern of dress accessories in Roman Britain with brooches dating up to AD 250, after this point Mackreth (2011: 236) concludes only the military wore brooches. While this is most likely for the Crossbow brooch other British types such as the horse and rider brooches did persist into the late 4th century. Such conclusions also perhaps only represent when an artefact is manufactured. For example, SF 73 could have been deposited or redeposited up to 360 years after its manufacture. The reason could relate to duration of use, redeposition or perhaps curation. What is clear is that there was a fibula abandonment horizon by many parts of the population in the later 2nd century (Cool and Baxter 2016). In the 3rd and 4th centuries items of dress such as bracelets and hair pins come to dominate the assemblage, demonstrating the presence of high-status objects at the site.

Brooches

Twenty brooches were recorded. The brooches consist of 16 bow brooches, two plate brooches, one disc brooch and one penannular brooch. The group follows the general pattern one might expect for such a site from the region, with one Colchester derivative and seven Polden Hill brooches, of which some are notable in their design and decoration. One T-shaped brooch, also common within assemblages from the region, is also present.

The brooches have been divided by form and ordered by Mackreth Type and Hull Type, a system of categorisation derived from Bailey and Butcher (2004) and used for comparison with other regional assemblages.

The manufacturing date of the brooches ranges from *c.* AD 40 to *c.* AD 250. A number of the brooches were deposited in contexts which have been dated substantially later in the Roman period - perhaps later than they would have continued to have been to be worn, given the abandonment horizon in the mid-2nd century. Examples include SF 60 (produced in the 1st century AD and deposited *c.* AD 275-400), SF 64 (produced *c.* AD 60-160 and deposited AD 275-400) and SF 73 (produced *c.* AD 40-60 and deposited AD 275-400). This could be for a number of reasons, but highlights possible length of time such objects could have been used or curated prior to their deposition.

The range of brooches suggests a regional focus to the dress accessories worn at the site. The key exception to this pattern of an assemblage dominated by south-western types is the presence of a Dragonesque brooch (SF 231), most probably made in Yorkshire. There are a number of notable similarities between this brooch assemblage and those from other villa sites in the vicinity, such as that from Keynsham, for example.

Late Iron Age

SF 43 (Context 3437 - Fill of narrow ditch [3373] located in the south east corner of Area B and aligned north-west to south-east, Period 3.3 AD 1-125)

An incomplete Late Iron Age to Roman copper-alloy 'Lowbury' style brooch (Mackreth ND.2c; Hull T10-11). The brooch is in three fragments consisting of the bow of the brooch and a fragment of the pin. The bow expands to 7.5mm at the centre of the bow before tapering to the catchplate (1mm thick). The outer edges of the bow are decorated with paired rows of punched squares. The catchplate is incomplete and broadly triangular. The brooch is 46mm in length, 7.5mm wide and weighs 1.45 grams.

Lowbury brooches appear to have been produced around AD 43 and gone out of use by AD 80 (Mackreth 2011). Although Lowbury brooches date to the Roman period chronologically, they are a distinctively Late Iron Age type. Mackreth (2011: 16) discusses the form and links the type to the perceived Atrebatic territory. The distribution of the type is largely contained to Hampshire, Berkshire and South Oxfordshire and the immediate vicinity, although other examples are recorded in Gloucestershire.

Aucissa

SF 73 (Context 3656 – Bathhouse – drainage culvert {4218}, Period 4.4 AD 275-400)

An incomplete Roman copper-alloy Aucissa brooch, probably of the transitional type (Mackreth A.3; Hull T51). The wings (10.5mm wide) are folded upwards to hold the iron axis bar. To the reverse is a recess for the missing hinged pin. The bow tapers from 8.5mm wide at the wings to 2mm at the missing knop for the foot. The bow is damaged but is decorated with four raised ridges and three grooves. The lower section of the bow appears to be plain. The catchplate is triangular and incomplete. The brooch is 40.5mm in length, 10.5mm wide and weighs 1.51 grams.

The brooch is similar in design to an example from Wycomb (Mackreth 2011: 133 no. 14586). This suggests it may be a Type 3.b, a number of which have been recorded from Gloucestershire. Bayley and Butcher (2004: 68 nos. 86-88) illustrate several similarly plain Aucissa brooches with narrow bows from Richborough and suggest a date of *c.* AD 40-60 for the type.

Hod Hill

SF 250 (Unstratified)

An incomplete Roman tinned copper-alloy Hod Hill brooch, surviving in two pieces (Mackreth HH.4.b3; Hull T60-79). The wings (18.5mm wide) are folded upwards to hold the iron axis bar in place. To the reverse is a recess to hold the incomplete hinged pin. The upper bow is decorated with two horizontal ridges. A rectangular panel with four raised vertical ridges has two knopped projections. Each knop is decorated with two vertical ridges, the left knop is incomplete. Below the rectangular panel the bow tapers to the foot and is decorated with six horizontal ridges. The foot is broadly circular. The surviving catchplate is broadly triangular. The brooch is 54mm in length, 23mm wide and weighs 5.68 grams.

Such brooches date from AD 43 and Bailey and Butcher (2004: 153) suggest that the type fell out of use by *c.* AD 70.

Colchester derivatives

SF 60 (Context 3234 – Foundation of bathhouse, Period 4.4 AD 275-400) Figure 6.8

An incomplete Roman copper-alloy Colchester derivative dolphin brooch with a hinged pin (Mackreth CD H.1a; Hull T94). The wings (40mm wide) are circular in cross section. They are completely moulded with bead and reel decoration. To the reverse the wings are decorated with horizontal and vertical grooves, representing an imitation sprung pin system. In the centre is a recess to hold a complete hinged pin. The pin is 51mm in length. The bow is decorated with multiple ridges and grooves. The upper bow is decorated with a central raised ridge 26mm in length. At the point where the ridge terminates two ridges run along the edges and meet at the centre of the bow. The remainder of the bow is decorated with a V-shaped groove flanked by two ridges that run until the foot. The openwork catchplate is triangular and has two openwork panels separated by a thin section of catchplate in the form of a Z. The curl of the catchplate is complete and is decorated with three sets of two horizontal ridges. The brooch is 68mm in length, 39mm wide and weighs 33.72 grams.

In form and cross-section the brooch is very similar to the examples listed by Mackreth (2011: Plates 54-55). The inclusion of decoration forming an imitation spring to the reverse is interesting and is not paralleled in Mackreth (2011) or Bailey and Butcher (2004). It is perhaps a transitional example between the sprung and hinged system that is seen on these brooches. Imitation springs are, however, recorded on other types such as the applied hook (Bailey and Butcher 2004: 157). The example from Snettisham (Mackreth 2011: 82 no. 2470) dates from the late 1st and early 2nd century. The brooch is likely to have been produced in the mid to late 1st century AD.



Figure 6.8 A selection of brooches from Lyde Green

Polden Hill

SF 212 (Unstratified)

An incomplete Roman copper-alloy Polden Hill brooch (Mackreth PH.2b1; Hull T95-103). The wings (23mm wide) are D shaped in cross section. They terminate in two incomplete circular end caps with a circular perforation to hold the now absent axis bar. To the reverse is a recess to hold the missing sprung pin. At the top of the bow is an incomplete pierced lug. The surviving section of the bow is decorated with recessed rectangular panels, the remainder of the brooch is missing. The recesses would have probably held enamel. The brooch is 20.5mm in length, 23mm wide and weighs 2.97 grams.

A brooch with similar decoration on the upper bow and a Polden Hill system sprung pin was recorded from Kingscote, Gloucestershire in a context which dates to AD 130-200 (Mackreth 2011: Plate 68 no 12064). Mackreth (2011: 100) notes that such brooches have a flat faced upper bow with enamelled decoration and use either a Polden Hill or hinged pin system. Bayley and Butcher (2004: 90) suggest that the Polden Hill method of pin attachment was limited largely to the years AD 80-120.

SF 14 (Context 2202 - Fill of ditch [2006] = [2484], Period 4.2 AD 125-300)

An incomplete Roman copper-alloy Polden Hill brooch (Mackreth PH.3; Hull T95-103), the brooch survives in four fragments. The wings (33mm wide) are D-shaped in cross section They terminate in circular end caps with a circular perforation to hold the axis bar, which is missing. The wings have two sets of vertical incisions flanking a raised ridge, which is decorated with horizontal grooves. To the reverse is a recess to hold the incomplete sprung pin. At the top of the bow is a pierced lug. The bow tapers from 12mm wide at the wings to 4.5mm wide at the break. The upper bow is decorated with a short, raised ridge below the lug. This is flanked by two grooves running along the edge of the bow. The catchplate and foot are missing. The brooch is 40mm in length, 33mm wide and weighs 7.29 grams.

A brooch with similar decoration on the wings was recorded at Cirencester (Mackreth 2011: Plate 46 no. 1806).

SF 206 (Unstratified) Figure 6.8

An incomplete Roman copper-alloy Polden Hill brooch of the Western group (Mackreth PH.5a1; Hull T95-103). The wings (22mm wide) are D-shaped in cross section. They terminate in circular end caps with a circular perforation to hold the axis bar. The wings are decorated with two vertical grooves at both ends. To the reverse is a recess, the raised edges of the reverse of the wings has been filed flat. The patina suggests that the sprung pin is a replacement and the filing is a modification to allow the replacement to fit in the recess. At the top of the bow is a pierced lug. The bow tapers from 10mm wide at the wings to 1.5mm at the foot. The upper bow is decorated with a raised ridge flanked by two grooves. The ridge and part of the pierced lug are decorated with horizontal grooves along their length. The lower bow is plain and undecorated. The catchplate is complete and triangular in plan, with a central triangular perforation. The brooch is 68mm in length, 22mm wide and weighs 15.51 grams.

Mackreth (2011: 75) defined the Type 5.a1 because of the two mouldings on each wing, such as in this example. A similar brooch was recorded from Prestatyn, Wales, found in a context dating to the late 3rd or early 4th century (Mackreth 2011: Plate 49 no. 1586).

SF 16 (Context 3139 – Structure {4226}, Period 4.2, AD 125-300) Figure 6.8

An incomplete Roman copper-alloy Polden Hill brooch of the Western group (Mackreth PH.5a4; Hull T95-103). The wings are incomplete, the left wing is detached. The incomplete wings (18.5mm wide) are D-shaped in cross section. They terminate in circular end caps with a circular perforation to hold the axis bar. The wings are decorated with two vertical grooves at both ends and two grooves flanking the bow. To the reverse is a recess to hold the now missing sprung pin. At the top of the bow is a pierced lug. The bow tapers from 5.5mm wide at the wings to 2mm at the break above the foot. The upper bow is decorated with a raised ridge. The lower bow is plain and undecorated. The catchplate is incomplete. The brooch is 32.5mm in length, 18.5mm wide and weighs 1.84 grams.

Mackreth (2011: 75) defined the Type 5.a4 because of the several mouldings on each wing such as this example. A similar brooch was recorded by Mackreth from Keynsham (2011: Plate 50 no. 1585). Mackreth (2011: 76) notes that PH 5.a4 has a distribution in the Lower Severn Valley and possibly the Avon. An example of this type from Towcester dates from AD 50 to 100.

SF 171 (Unstratified)

An incomplete Roman copper-alloy Polden Hill brooch of the Western group (Mackreth PH.5b1; Hull T95-103). The wings (22.5mm wide) are D-shaped in cross section. They terminate in circular end caps with a circular perforation to hold the now absent axis bar. The wings are decorated with a vertical groove at both ends and a transverse groove running from the end of the wing to the edge of the bow. The reverse has a recess to hold

the incomplete sprung pin. At the top of the bow is a pierced lug. The bow tapers from 10.5mm wide at the wings to 2mm at the foot. The upper bow is decorated with a raised ridge, which is decorated with vertical incisions. The upper bow has two projections running along *c*. 11mm of its length. These are decorated with a single vertical ridge and groove. The lower bow is plain and undecorated. The catchplate is complete, triangular in plan with a triangular recess, the reverse of the curl of the catchplate is decorated with horizontal and transverse grooves. The foot is formed from a simple projecting knop. The brooch is 48.5mm in length, 22.5mm wide and weighs 7.23 grams.

Mackreth (2011: 75) defined the Type 5.b1 because of the form of the bow. A similar brooch was recorded by Mackreth from Cirencester (2011: Plate 50 no. 1735) and the example from Wilcote, Oxfordshire dates to the mid-2nd century. This example has slightly different decoration on the wings in contrast to the illustrated examples of Type 5b.

SF 172 (Unstratified)

An incomplete Roman copper-alloy Polden Hill brooch (Mackreth PH 5.b4; Hull T95-103). The wings (30mm wide) are D-shaped in cross section. They terminate in circular end caps with a circular perforation to hold the axis bar, which is missing. The wings have moulded, bead and reel decoration. To the reverse is a recess to hold the incomplete sprung pin. At the top of the bow is a pierced lug. The bow tapers from 8.5mm wide at the wings to 3mm wide at the break along the catchplate. The upper bow is decorated with a short, raised ridge below the lug. This is flanked by a raised V-shape. There are two projections located on the upper bow which run for 15.5mm. The surviving section of the lower bow is plain and undecorated. The catchplate is incomplete and the foot is missing. The brooch is 37.5mm in length, 30mm wide and weighs 9.68 grams.

Mackreth (2011: 75) defined the Type 5.b4 by the moulding on the wing and the mouldings on the head of the bow. A brooch with similar decoration on the wings was recorded from Broxtowe, Nottinghamshire and dated to before AD 75 (Mackreth 2011: Plate 50 no. 12954).

SF 332 (Unstratified) Figure 6.8

An incomplete Roman copper-alloy Polden Hill brooch (Mackreth PH.8; Hull T95-103). The wings (24.5mm wide) are D-shaped in cross section. They terminate in circular end caps with a circular perforation to hold the axis bar. The wings are of varying length. One wing is decorated with two vertical grooves, the other with three. To the reverse is a recess to hold the incomplete sprung pin. At the top of the bow is a pierced lug. The lug is decorated with a groove flanked by two ridges. The bow tapers from 13.5mm wide at the wings to 4mm at the break above the foot. The upper bow is decorated with a raised lozenge filled with orange enamel. Below the lozenge are five sets of two facing triangular recesses, which flank four raised lozenges. The recesses would have been filled with enamel, which is now missing. The outer edge of the bow is decorated with a single V-shaped vertical groove. A second vertical groove runs until the triangular recesses. The outer edge of the bow is decorated with notches along the section with the triangular recesses. The catchplate is incomplete and the foot is missing. The brooch is 68mm in length, 24.5mm wide and weighs 12 grams.

Mackreth (2011: 75) defined the Type 8 because of the raised boss, the recesses for enamel and the notches along the side of the bow. A very similar example has been recorded from Keynsham and Mackreth suggests that this is an isolated sub-type of the Headstud brooch, or perhaps a linear descendent (Mackreth 2011: Plate 53 no. 2101). Examples include a brooch from Kingscote, which dates to the late 1st to early 2nd century, and a number have been recorded from Somerset, Wiltshire and Gloucestershire (Mackreth 2011: 81).

T-Shaped

SF 64 (Context 3578 - Fill of [3376] N-S boundary ditch on far E side of Area B, Period 4.4 AD 275-400) Figure 6.8

An incomplete Roman copper-alloy developed T-shaped brooch of the south-western type (Mackreth CD.16; Hull T138-140). The wings (25.5mm wide) are circular in cross section and undecorated. To the reverse is a recess to hold the incomplete hinged pin. An incomplete circular headloop projects from the top of the brooch. The loop is incomplete. Below the loop is a rectangular projection decorated with two horizontal grooves. The bow tapers from 14mm wide at the wings to 6mm at the foot. The bow is decorated with a raised vertical ridge. A vertical groove is located on both edges of the bow and runs from the wings to the foot. The foot is decorated with three horizontal grooves flanking three ridges. The catchplate is triangular and the curl of the catchplate is complete. The brooch is 66mm in length, 25.5mm wide and weighs 9 grams.

This brooch appears to be part of a distinct sub-group of the 'developed' T-shaped brooch, identified by Bayley and Butcher and dating to *c*. AD 60-160 (2004: 167-168). They generally are of a larger size and feature relatively simplistic decoration. Unlike the examples listed in Mackreth (2011: Plate 64-65) the bow is decorated with a simple ridge, but the examples in the plates are of a very similar form. The type is described as having a distribution focused on the south west, with the limited dating evidence suggesting a 2nd century date range (Bailey and Butcher 2004: 167-168; Mackreth 2011: 96).

Headstud

SF 207 (Unstratified)

An incomplete Roman copper-alloy Headstud brooch (Mackreth H.6; Hull T149). The wings (17.5mm wide) are D-shaped in cross section with a flat front face. They are decorated with three vertical incisions. To the reverse is a recess to hold the incomplete hinged pin. An incomplete circular headloop projects from the top of the brooch. The bow is bent and tapers from 7mm wide at the wings to 4.5mm wide before expanding into the foot. The bow is decorated with a projecting headstud. The headstud is decorated with a cross. Below the headstud the bow is decorated with a central longitudinal ridge, flanked by parallel channels. The ridge is decorated with notches running along its length on either side. The channels would probably have been inlaid with enamel, which is missing. The foot is decorated with two horizontal ridges and three horizontal grooves located above the flat foot, which is broadly circular. The catchplate is triangular. The brooch is 43mm in length, 17.5mm wide and weighs 8.58 grams.

Mackreth (2011: 107) notes that the type was established by AD 75 and on specific examples the cross on the headstud is a petal. A very similar example was recorded from Walsingham, Norfolk (Mackreth 2011: Plate 73 no. 11868). Type H.6 examples have been recorded from Wiltshire, Gloucestershire and Somerset.

Uncertain bow brooches

Three unstratified and incomplete bow brooches were recovered from the excavation (SF 84, SF 242 and SF 331). SF 84 and SF 242 consist of the lower bow, foot and catchplate of two brooches. SF 331 is a fragment of the bow. It is decorated with four sets of facing triangular recesses, which probably contained enamel.

Disc

SF 311 (Context 1089 - Fill of pit [1088] just outside entrance to 'D'-shaped enclosure [1005], Period 4.1 AD 125-200) Figure 6.8

An incomplete Roman gilded copper-alloy, wheel-type disc brooch (Mackreth Plate 3.b5; Hull T266). The brooch consists of a circular disc, the reverse of which is flat and undecorated. It features an incomplete single lug for the missing sprung pin mechanism with an incomplete hooked plate opposite. The centre of the disc features a central domed projection, terminating in a circular knop surrounded by six projecting spokes. The central dome and the surrounding wheel are separately applied. There is a raised band along the circumference of the front face. There are slight traces of gilding on the front face. The brooch is 23.5mm in diameter and weighs 5.91 grams.

The wheel-type disc brooch is a comparatively rare form (Mackreth 2011; Snape 1993). The only dated parallel listed by Mackreth (2011: 162 no. 10947) is from Inworth, Essex and is dated AD 250-370. Snape (1993) dates the brooch form as mid-4th century. Mackreth (2011: 163) argues that now such a late date for gilded types is unacceptable, although also noting a few do survive later than the 3rd century. This example dates from a 2nd-century phase, which broadly fits with the chronology suggested by Mackreth.

Plate

SF 217 (Unstratified) Figure 6.8

An incomplete Roman copper-alloy plate brooch of the 'tutulus' type (Mackreth Plate.5b; Hull T269). The brooch would have been circular (27.5mm in diameter) with a raised, truncated conical centre culminating in a circular boss with a raised central pellet. The surviving section of the circumference has a raised band within which are two circumferential grooves. The majority of this type of brooch has six pellets located around the circumference of the brooch. It is possible two of these broken pellets are visible adjacent to the pin and the catchplate. The reverse is concave and undecorated. A fragment of the hinged pin survives within the double lug. A fragment of the catchplate also survives. The brooch is 27.5mm in length and weighs 3.57 grams.

Mackreth (2011: 164) suggests that these brooches date from AD 70-250. A similar parallel has been recorded by Mackreth (2011: Plate 108 no. 15483), which he defines as a Type 5.b.

SF 231 (Unstratified) Figure 6.8

An incomplete copper-alloy Roman enamelled dragonesque brooch (Mackreth Drag.3.bx; Hunter 2010, Type.A1a, head type A; Hull T200). The brooch is S-shaped in plan with a dragon-style head and foot. The lower head and the pin are missing. The head is a Hunter form A. The ears are missing, and the eye is decorated with a double ring and dot. The head is curved towards the snout, which is slightly upturned. The mouth is depicted with a curved groove. The body is a Hunter Type A1a. It has a central enamelled ring and dot within a lozenge-form recess (similar to an eye). The remainder of the body has two triangular recesses tapering towards each neck. The ring and dot recess is filled with red enamel, the lozenge form is filled with degraded enamel. The triangular recesses are filled with red enamel. The brooch is 48.5mm in length, 32.5mm wide and weighs 11.05 grams.

Broadly these brooches are dated AD 75-175. Mackreth (2011: 187) provides no dated examples for the specific type. He lists an example from Great Bedwyn, Wiltshire, also noting that there is a general absence in the lower Severn Valley. The majority of the dragonesque brooches come from Yorkshire, where they were made in quantity (Mackreth 2011: 188). Hunter (2010: 101) argues that enamelled types are markedly more popular on military and urban sites than they are in rural areas. This is also reflected in the PAS dataset, within which there is a higher number of non-enamelled types.

Penannular

SF 58 (Unstratified) Figure 6.8

An incomplete Roman copper-alloy, penannular brooch with knurled knobs (Mackreth PEN.K2.b, Fowler Type A2, Booth Type A1). The brooch has a plain band which is circular in cross section (3mm wide). The brooch terminates with two knurled knobs (5.5mm wide). These appear to be flattened but this could be due to corrosion. The brooch is 26mm in length and weighs 3.24 grams.

Booth Type A1 has currently been ascribed, as no collar can be observed (a feature found on the flattened types). Mackreth (2011: 212) argues that there is some degree of standard sizing, with most examples ranging from 17mm-24mm (this example is 26mm). The contexts within which examples have been found range in date from AD 80 to AD 350. Booth (2015: 139) dates brooches with a diameter of less than 35mm to the middle of the 1st century AD onwards.

Finger rings

SF 314 (Context 1345 - Fill of boundary ditch [1045], Period 4.2 AD 125-300) Figure 6.9

A Roman copper-alloy finger ring. The ring is rectangular in cross section. The front face is decorated with two parallel circumferential grooves. A similar silver ring was recorded from Uley from a fifth century context (Woodward and Leach 1993: fig. 173 no. 25). The ring is 22.5mm in diameter and weighs 2.49 grams.

SF 151 (Unstratified)

A complete copper-alloy finger ring, probably of Roman date. The ring is rectangular in cross section 2mm wide and appears to be plain and undecorated. It is 18.5mm in diameter and weighs 0.86 grams.

Bracelets

Eight copper-alloy and four shale bracelets, or armlets, were recovered from Lyde Green. The latter have been identified from a visual inspection. The copper-alloy bracelets have been recorded in the groups defined by Cool (1983). Bracelets constructed of a variety of materials including copper-alloy and shale became more common and popular in the 3rd and 4th centuries (Cool 2010: 297). There was a surge of new types in the 3rd century and bracelet wearing was at its height in the 4th century. In a similar pattern to the majority of assemblages, plain shale bracelets from the site outnumber the decorated examples. Plain examples were in use throughout the Roman period with decorated examples becoming more common in the late Roman period (Cool 2010: 300).

SF 117 (Context 3894 - Spread/layer associated with disturbance of Villa Structure {6197}, Modern)

An incomplete copper-alloy cable twist bracelet of Cool Group 1. The bracelet is formed of three strands of copper-alloy which have been twisted together. The bracelet is 50mm in length and weighs 1.44 grams.

SF 269 (Context 6176 - Demolition layer over Villa Structure {6197}, Period 4.5 AD 300-400)

An incomplete copper-alloy probable cable twist bracelet of Cool Group 1. The bracelet is formed of two strands of copper-alloy which have been twisted together. The bracelet is 51.5mm in length and weighs 2.17 grams.

Cool (1983: 122) dates Group 1 bracelets from the 2nd century onwards, with the majority dating from the 3rd and 4th centuries. Such a date would be consistent with the examples from the site. The terminals of these bracelets are missing. Generally they were fastened with hook and eye terminals (Cool 2010: 297).

SF 272 (Context 6208 – Levelling layer/construction of Villa Structure {6197}, Period 4.5 AD 300-400) Figure 6.9

An incomplete section of copper-alloy Roman bracelet. The bracelet is oval in cross section and decorated with projecting knops. The knops alternate and are 5mm and 3mm high respectively. No further decoration is visible. The bracelet is 45.5mm in length and weighs 3.48 grams.

The object has similarities to Iron Age knobbed bracelets but given the context a Roman date is more likely. The bracelet is broadly comparable to some examples from Cool Group 13.

SF 32 (Context 3367 - Fill of ditch [3357] which was cut by cremation cluster, Period 3.3 AD 1-125) Figure 6.9

A fragment of a copper-alloy Roman bracelet of Cool Group 16 with an incomplete hook and eye clasp. The bracelet is D-shaped in cross section (2.5mm wide). It

is decorated with an alternating rib and plain pattern, consisting of a raised rib decorated with horizontal grooves. The number of grooves varies from five to fourteen and each varies in length from 14mm to 8mm. The grooves do not run the full width of the bracelet on two of the decorated sections. The plain sections vary in length from 12.5mm to 9.5mm. The eye for the clasp is incomplete, it is formed from a circular perforation 2mm in diameter. The bracelet is 36mm in length and weighs 2.47 grams.

SF 68 (Unstratified) Figure 6.9

A fragment of a copper-alloy Roman bracelet of Cool Group 16 with an incomplete hook and eye clasp. The bracelet is rectangular in cross section and narrows from 2.5mm by the eye clasp to 2mm at the break. It is decorated with an alternating rib and plain pattern consisting of a raised rib decorated with horizontal grooves. The number of grooves varies from four to ten. Four of the five sections are decorated with ten grooves and are *c.* 11mm in length. The plain sections are *c.* 6mm in length. The eye for the clasp is formed by a slightly off-centre circular perforation 2mm in diameter. The bracelet is 36mm in length and weighs 1.57 grams.

The form and size of both Group 16 bracelet fragments suggest that they might have been made for children. Cool (1983: 160) cites similar examples from Winchester, Colchester and Portchester, which date to the mid-4th century. Similar examples from Lankhills, Winchester, such as that found in Grave 985, are suggested to have been made post-AD 350 (Cool 2010: 142).

SF 110 (Context 3819 – East-West ditch on south side of Structure {4196}, Period 4.4 AD 275-400) Figure 6.9

A fragment of a late Roman copper-alloy, multiple-motif bracelet of Cool Group 23. The bracelet is decorated with bevelled edges and a zig zag pattern of punched dots. The fragment is 23mm in length and weighs 1 gram.

Cool (2010: 298) notes that Group 23 bracelets were less common than Group 22 (plain zig-zag) and this particular example is the variant Group 23D. Parallels are also illustrated by Swift (2000: Fig. 192) who also shows that these bracelets were well distributed across the south of Britain. Similar examples dated to the 3rd to 4th century have also been recorded from Colchester (Crummy 1983: fig. 47 no. 1732 and 1724).

SF 55 (Context 2417 - Fill of 'L'-shaped ditch [2476], Period 4.4 AD 275-400) Figure 6.9

An incomplete copper-alloy bracelet. The surviving section is broadly rectangular. One terminal is complete. The bracelet is decorated with two grooves running along the entire length. Within these grooves are eight punched pellets (running for a length of 25mm). The areas to the left and right of this section are plain. It is possible that the fragment is part of a multiple-motif bracelet due to the undecorated sections, but it is also possible that the fragment is from a set of decorated 4th century tweezers. The bracelet is 44m in length and weighs 0.74 grams.

SF 42 (Unstratified) Figure 6.9

A fragment of a copper-alloy Roman bracelet. The surviving section of the bracelet is D-shaped in cross section and decorated with three sets of double horizontal grooves. The bracelet is 25.5mm in length and weighs 3.4 grams.

SF 263 (Context 6138 - Fill of East-West aligned ditch [6137] north end of Area B, Period 4.4 AD 275-400) Figure 6.9

A fragment of a shale bracelet. The bracelet is broadly D-shaped in cross section (6mm wide and 6mm thick). The internal edges of the bracelet are bevelled and there is a raised central ridge. The outer edge has a raised central ridge flanked by two grooves. The outer edges of the grooves are decorated with transverse notches. The bracelet is 40.5mm in length and weighs 1.47 grams.

Broadly similar decoration from a shale bracelet has been recorded from Colchester (Crummy 1983: fig. 38 no. 1565), dated to the late Roman or post-Roman period. The decoration on this example has a circumferential groove on the central ridge and the central ridge is also decorated with notches.

SF 113 (Unstratified) Figure 6.9

A fragment of a shale bracelet. The bracelet is D-shaped in cross section (8.5mm wide, 6mm thick). Internally the bracelet has an incised central circumferential groove. The outer face is decorated with three incised circumferential grooves. The bracelet is 17mm in length and weighs 0.71 grams.

SF 203 (Context 3143 - Fill of curvilinear [3719] cut by corn dryer enclosure {4219}, Period 3.3 AD 1-125)

A fragment of a shale bracelet. The bracelet is D-shaped in cross section (12.5mm wide and 7.5mm thick) and undecorated. The bracelet measures 51.5mm in length and weighs 5.21 grams.

SF 222 (Context 2253 - Fill of ditch [2254] associated with 'L' shaped ditch [2476], Period 4.4 AD 275-400)

A fragment of a shale bracelet. bracelet is oval in cross section (16.5mm wide and 12mm thick) and undecorated. The fragment is 49mm in length and weighs 9.33 grams.

Beads

The majority of the beads from Lyde Green date to the late Roman period which is consistent with the increase in popularity which then occurred. They are mostly fashioned from glass, with shale and amber being less common. There is also a possible example made from coral.

SF 215 (Context 3676 - Fill of stone-lined pit within bathhouse {4213}, Period 4.4 AD 275-400) Figure 6.9

A complete shale bead of the standard bead type. The bead is broadly circular in plan with two faces, sanded down where the perforations have been drilled for attachment. The front face of the bead is decorated with a single circular recess in the centre of the bead. The front face is slightly convex, the reverse is flat. The bead has been pierced with two circular perforations. The bead is 15.5mm in length, 6mm thick and weighs 1.21 grams.

A similar bead, in terms of the decoration and the presence of two perforations, was recorded from Colchester and dated to AD 320-*c.* 450 (Crummy 1983: fig. 35 no. 956).

SF 164 (Unstratified)

A fragment of a green glass bead of the plain annular bead type. Broadly a quarter survives suggesting the bead would have been *c.* 20mm in diameter. It is D-shaped in cross section. The internal perforation would have been *c.* 10mm. The bead weighs 0.67 grams.

SF 192 (Context 3161 – Fill of North-South ditch north of Structure {4226}, Period 4.4 AD 275-400)

A blue glass bead of the short biconical type. It is broadly triangular in cross section. The perforation is 2mm in internal diameter. The bead is 6.5mm in diameter and weighs 0.04 grams.

SF 193 (Context 3480 – Fill of bathhouse plunge pool, Period 4.4 AD 275-400)

A bead of the short biconical type, which appears to be fashioned from coral. It measures 3mm in diameter, is 1.5mm thick and weighs 0.03 grams.

SF 336 (Context 1276 - Fill of earlier 'D'-shaped enclosure [1274] in Area D, Period 3.1 AD 1-125) Figure 6.9

A complete blue glass bead of the short bead type. The bead is circular, D-shaped in cross section and has a circular perforation 4.5mm in internal diameter. The bead weighs 1 gram.

SF 194 (Context 2342 - Fill of 'L' shaped ditch [2476], Period 4.4 AD 275-400) Figure 6.9

A complete shale bead of the short cylinder type. The bead is undecorated. The bead is 3mm in diameter, 2.5mm thick and weighs 0.02 grams.

SF 127 (Unstratified) Figure 6.9

A green cylindrical glass bead of the long cylinder type. The perforation is 1mm wide. The bead is 7mm in length, 3mm wide and weighs 0.13 grams.

SF 195 (Context 3089 - Fill of foundation cut of late, ephemeral structure {4222}/wall {4115} east of Structure {4226}, Period 4.4 AD 275-400) Figure 6.9

A fragment of an amber bead. The bead is flat to the reverse and the front face is convex. The perforation is off-centre in the surviving fragment suggesting that either it may have not been circular, or that there were multiple perforations. The perforation has an internal diameter of 2mm. The bead is 10.5mm in length, 5.5mm wide, 5mm thick and weighs 0.16 grams.

Hair pins

Four bone hair pins were recovered from the excavation and have been recorded in the groups defined by Crummy (1983). The hair pins were hand carved and SF 267, for example, does not appear to have been sanded down. SF 116 shows potential evidence of being re-sharpened. Crummy (1983: 20) notes that Types 1 and 2 were liable to break at any point along the shaft, which may explain why these particular examples are incomplete.

SF 307 (Context 6168 - Construction/Foundations of Villa Structure {6197}, Period 4.4 AD 275-400)

An incomplete bone pin of Crummy's Type 1. The head and part of the shaft survive. The head is flat and tapers from 7.5mm to 4.5mm at the break. The hair pin is 43.5mm in length, 7.5mm wide and weighs 2.19 grams.

Type 1 pins are found in deposits at Colchester which date to the 1st to the 4th centuries (Crummy 1983: 20).

SF 267 (Context 6176 – Demolition layer within Villa Structure {6197}, Period A.5 AD 300-400)

An incomplete bone pin of Crummy's Type 2 consisting of a single transverse groove located beneath a conical

head. The pin has been carved with a blade and has not been sanded smooth. The head is conical (4.5mm in diameter). The pin expands slightly below the transverse groove to 5mm before tapering to the break (3.5mm). The hair pin is 42mm in length, 5mm wide and weighs 1.12 grams.

Crummy (1983: 21) dates Type 2 hair pins to *c.* AD 50-200.

SF 116 (Unstratified) Figure 6.9

A complete bone pin of Crummy's Type 5 with a reel beneath a conical head. The head is conical (6mm wide) below which is a single reel (6mm wide). The shaft tapers from 3mm wide below the reel to 1mm at the tip. The shaft has a slight octagonal cross section in places and there is evidence of manufacture from a blade. The tapering shaft has possibly been re-sharpened as the lower shaft appears to have been sanded smooth. The hair pin is 93mm in length, 6mm wide and weighs 1.44 grams.

A parallel for this pin was recorded in Colchester (Crummy 1983: fig. 21 no. 402) and a 4th-century floruit has been suggested for this type.

SF 306 (Context 6095 - Posthole within Villa Structure {6197} sealed by demolition, Period 4.4 AD 275-400)

A fragment of the shaft and the tip of a bone pin. The shaft tapers from 4.5mm at the break to 3mm at the blunted tip. The fragment measures 24mm in length and weighs 0.29 grams.

Footwear

As with many archaeological sites, hobnails were the only remains of shoes that survived at Lyde Green. A total of 198 hobnails were recovered from the excavations. Most were not selected for x-radiography and appeared to have deteriorated significantly since their recovery. The vast majority came from just three contexts. One-hundred-and-thirty were found at the base of the cist excavated in Area C. A group of 18 was excavated from one of the cremation burials in Area B. The two groups recovered from funerary contexts are discussed separately below in the section on the cremations and inhumations.

Finally, 43 of the 50 hobnails recovered outside of a funerary context came from Context 3870 (Levelling layer/construction of Structure {4196}, Period 4.4 AD 275-400). The quantity of hobnails from this single context could suggest that they were perhaps from a single shoe or a pair. Although there was a gradual decrease in size and increase in quantity over time the number of hobnails per shoe varies significantly, partly based on style and also perhaps foot size. Volken (2017) highlights that in the 1st half of the 1st century AD on average 90-106 hobnails were used on average which increased to 132-160 in the 2nd half of the 1st century (Volken 2017). At Billingsgate in London, the number varied from 44-100 (Rhodes 1980: 104). The dimensions of the latter group ranged from 11mm to 20mm in length and the heads were 9-15mm in width.

Toilet implements

SF 61 (Context 3560 - Foundation of Structure {4226}, Period 4.2 AD 125-300) Figure 6.9

A complete copper-alloy Roman nail cleaner of Crummy Type 1a with lugs at the neck. The nail cleaner is flat and has a projecting loop with a circular central perforation. The loop has a collar and convex recess beneath. The main body of the nail cleaner is broadly rectangular and widens slightly towards the bifurcated tip. The object is decorated with broadly oval punches along the left-hand edge of the object. Above the bifurcated tip is a vertical groove 6mm in length. The nail cleaner is 43.5mm in length, 4.5mm wide and weighs 1.13 grams.

Crummy (1983: 57) describes Type 1a as a mid to late 1st century type which may have continued into the 2nd century. An example, similar in form, was recovered from Uley in an early to mid-4th century context (Woodward and Leach 1993: fig. 177 no. 4) Eckardt and Crummy (2008) class this example as a sub-group B variant of the group of nail cleaners with spools, lugs or notches at the neck. They note that the group is far from coherent in distribution and date (Eckardt and Crummy 2008: 126).

SF 156 (Unstratified)

An incomplete set of copper-alloy tweezers of Eckardt and Crummy's (2008) plain group with straight sides. One of the tweezer blades has been bent outwards and has become detached. The blades are formed from a sheet of copper-alloy (1.5mm thick) which has been folded in upon itself. The blades are undecorated. The tweezers are 41mm in length, 7mm wide and weigh 2.85 grams.

SF 157 (Unstratified) Figure 6.9

A complete set of copper-alloy tweezers Eckardt and Crummy's (2008) group with marginal grooves. The blades are formed from a sheet of copper-alloy (1.2mm thick) which has been folded in upon itself. The blades are decorated with two horizontal grooves below the loop. The tweezers are 42.5mm in length, 5mm wide and weigh 2.74 grams.



Figure 6.9 Selected small finds from Lyde Green. Items of personal adornment and toilet implements

Such tweezers were used to remove unwanted body and facial hair and were used throughout the Roman period. Shorter tweezers such as these examples would have more spring and would be less prone to distortion. The majority of tweezers illustrated from the excavations at Colchester were undecorated (Crummy 1983: fig. 63). Of the 641 tweezers recorded from Britain by Eckardt and Crummy over 40% were of the plain type (2008: 148). The largest decorated group of tweezers was the marginal grooves type.

Textile manufacture and working

The assemblage contains two ceramic spindle whorls, two shale spindle whorls, a possible lead spindle whorl, and a set of triangular ceramic weights. The ceramic spindle whorls consist of a reused sherd of Samian ware and a reused sherd of Oxfordshire ware. The reused Samian example is from an early Roman phase, but such spindle whorls have also been noted in late Roman contexts at other sites.

Both shale spindle whorls are of the annular/ cylindrical type and were turned on a lathe. Cool (2010: 274) notes that such spindle whorls, along with biconical examples, are the most common type. Shale spindle whorls date from *c*. AD 340 and continue to the end of the 4th or perhaps into the 5th century. In burial contexts they have been found to have been overwhelmingly a female artefact and concentrated in the region of Dorset, Hampshire and Somerset (Cool 2010; Philpott 1991). Their distribution is in part due to the proximity of the Kimmeridge shale beds. Cool (2010) suggests that spindles may have been an appropriate accoutrement to symbolise high status.

SF 52 (Context 2401 – East-west aligned linear cut by enclosure [2468], Period 3.2 AD 1-125) Figure 9.1, No. 8.

A spindle whorl constructed from an abraded decorated sherd of Samian ware. The edges appear to have been ground down and the circular perforation is located within a floral motif. The spindle whorl weighs 12 grams. Examples of Samian ware reused as spindle whorls has been noted as a feature of a number of late Roman assemblages (Cool 2000).

SF 65 (Context 3580 – Fill of posthole, perhaps part of a possible water-lifting structure associated with well [3222], Period 4.4 AD 275-400) Figure 6.10

A ceramic spindle whorl produced from a sherd of Oxfordshire ware. The spindle whorl is broadly circular with a central circular hourglass perforation (6mm internal diameter). The edges appear to have been ground. The spindle whorl is 28mm in diameter and weighs 4.51 grams.

SF 47 (3368 – Bathhouse plunge pool, Period 4.4 AD 275-400) Figure 6.10

A complete annular spindle whorl fashioned from shale. The spindle whorl is lathe turned. It has D-shaped cross section and is decorated with a single circular groove located around the central perforation on both the upper and lower face. A circumferential groove is located around the edge of the whorl. The perforation is 8.5mm internally. The spindle whorl is 32.5mm in diameter, 17mm thick and weighs 14.05 grams.

SF 98 (Context 3678 – Fill of ditch [4181] containing Structure {3583}, Period 4.4 AD 275-400) Figure 6.10

A complete annular spindle whorl fashioned from shale. The spindle whorl is lathe turned. It has a D-shaped cross section and is decorated with a single circular groove located around the central perforation on both the upper and lower face. The perforation is 7.5mm internally. The spindle whorl is 35mm in diameter, 17mm thick and weighs 18.72 grams.

SF 126 (Context 3932 – fill of heat-affected pit/oven, Period 3.3 AD 1-125) Figure 6.11

Description by M. Stoakley

A group of approximately eight hand-made, triangular (equilateral), round-cornered, fired clay weights, weighing a total of 10.4kg. Two of the weights are complete and a third almost complete. Three more survive in substantial fragments, while others are more broken up. All fragments are clearly identifiable as similar triangular weights. The 41 pieces were found together in pit [3949], itself within a working area that predated Structure {4196} (described in Chapter 4). The most complete example (Figure 6.11 no. 1) weighs 1.27kg and, as with the majority, is similar to Type 1 found at Danebury (Cunliffe 1984: 401-406). As with the most common weights found at Danebury, the sides of the complete examples range from 135 mm – 150 mm in length with a width between 70 mm and 75 mm. It seems probable that a rod, or circular tool, was used to make the holes as, in general, the perforations are uniform and regular in appearance. They range from 15 mm to 20 mm in diameter. One almost complete example is pierced by only two holes, rather than three (Figure 6.11 no. 2).

The fabric of the weights is fairly uniform and comprises a light reddish-pink, oxidised fine clay matrix. No stamps, finger or thumb impressions or other marks are evident on any of the pieces. Most have at least one dark grey surface, which would indicate their position in the firing process. A number of different types of inclusion are present, including, but not limited to:

- very fine, well-sorted frequent grit-sand inclusions at c.1mm in diameter;
- well-sorted, common, rounded ferruginous pellets at c.<2mm in diameter;
- rare, poorly sorted, angular, reddish burnt flint at c.<1mm in diameter;
- sparse, poorly sorted, angular burnt flint inclusions at c.4mm – 10mm in diameter
- Rare – sparse, rounded voids at c.<1mm in diameter, indicative of organic material which has either fallen out or decomposed

Similar examples have recently been found at Ham Hill, Somerset, where pieces of four weights weighed 4.76kg (Timberlake 2013: 128-129). Timberlake notes similarities in dimensions between examples from the southwest and the east of England, but differences in weight. The diameter of the thread holes between the Ham Hill and Lyde Green weights is similar, ranging from 14mm to 20mm at Ham Hill, and from 15mm to 20mm at Lyde Green. A complete example from Ham Hill weighed 2.51kg, however, considerably heavier than the examples from Lyde Green (Timberlake 2013, 129).

The Ham Hill weights have been described as a loomweights, indicating a rôle in textile production. It seems highly probable that the Lyde Green weights were used in textile production, but it is also possible that they may have had other uses in domestic settlement activities, such as weighing down thatch for roofing, or for use in stretching animal hide. Despite the different possible uses for the objects, the Lyde Green weights compare well with the examples from Ham Hill, Danebury and Cambridgeshire. Their recovery at Lyde Green alongside dated pottery appears to indicate their use and eventual discard in the late 1st or early 2nd century AD.

SF 181 (Unstratified)

A lead weight or spindle whorl. The object is D-shaped in cross section with a large perforation 25.5mm in internal diameter. The outer face is undecorated. The object is 42mm in diameter and weighs 147 grams.

Household equipment

SF 67 (Context 3606 – Fill of narrow East-West ditch in north of Area B, Period 3.3 AD 1-125) Figure 6.9

An incomplete copper-alloy Roman finger-ring key (Guiraud Type 5a). The hoop is D-shaped (3.5mm wide) and becomes flat (the bezel) at the point where it joins the bit, so that it would have lain flat across the finger. The bit comprises a cylindrical shank (19.5mm in surviving length), the remainder of the rotary key is missing. The shank of the key has oblique wear suggesting use and highlights that this form is functional. The finger ring is 23.5mm in length and weighs 3 grams.

Dated examples of this form of finger ring key include those from Colchester dating to AD 250-300 and AD 320-450 (Crummy 1983: 84). Cool (1983: 249) notes examples from Canterbury (late 4th century), Dover (late 2nd to 3rd century) and Erning (3rd century). Swift (2017: 26) suggests that these finger ring keys date from the 3rd and 4th century and for much of their lives were used as functional keys.

Sixteen sandstone pot lids were recovered from the excavation. They were mostly circular or oval in form and the edges along the circumference had not been ground down. Eleven (70%) were recovered from Phase 4. The majority of the examples from Phase 4 were from contexts dating AD 275-400. They range from 46.5mm-135mm in diameter and nine (55%) are 70mm-90mm in diameter. They come from a range of contexts with no discernible clear pattern of deposition, only five are from the villa itself, three of which are from the fills of post holes [6226], [6178] and [6241].

Seven lead vessel repairs were recovered all of which are unstratified. They weigh between 8.45 and 50 grams. Only one example contains remnants of a ceramic vessel in situ. This consists of a sherd of coarseware with a reduced grey fabric (SF 329).

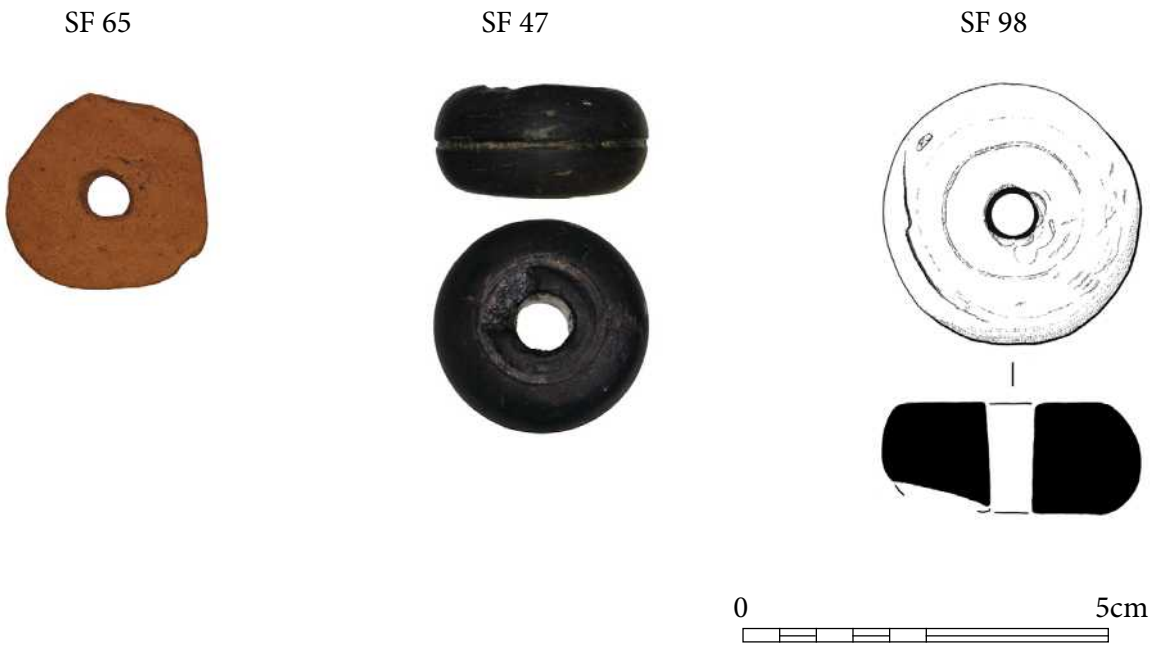
The glass assemblage consists of two bottle fragments. The first is a fragment of an ornate glass bottle and the second is constructed from clear glass (SF 288, Unstratified). Two further unidentifiable fragments of glass were recovered, both of which were from the fills of postholes within the villa structure which date to Period 4.4 AD 275-400 (SF 270, Context 6178 and SF 271 Context 6226)

SF 104 (Context 3726 – Fill of north-south ditch [3684] entering Area B at northern baulk, Period 4.4 AD 275-400)

A fragment of a mould blown green ornate glass bottle. The cylindrical neck (13mm in internal diameter) has an inward-folded flat rim, the wide ornate strap handle is attached at the shoulder, folded up and under the rim. The fragment is 43mm in length and weighs 16.48 grams.

Recreation

Ten gaming counters consist of six reused sherds of ceramic vessels, three sandstone counters and one possible example made of lead. The majority of the counters have a ground edge, but the surface is not abraded from use.



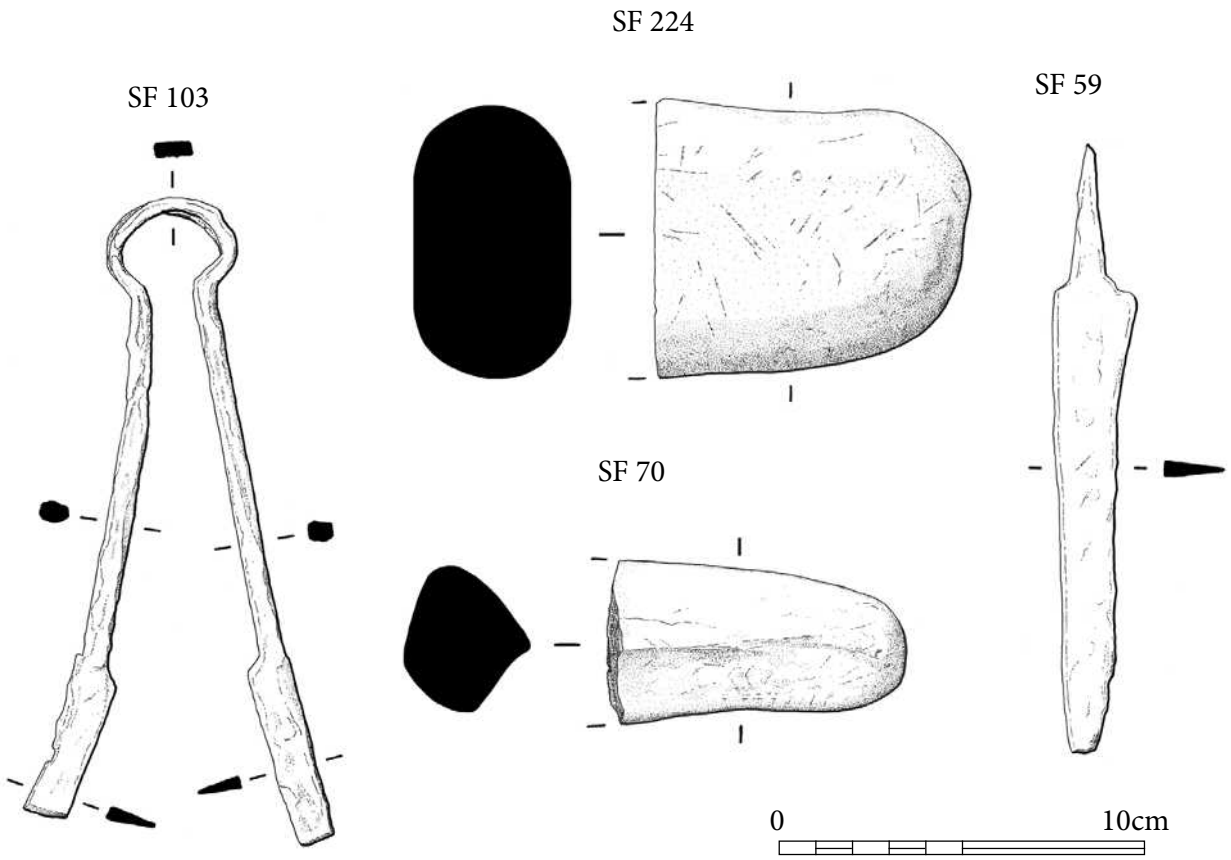


Figure 6.10 Selected small finds from Lyde Green



Figure 6.11 Ceramic weights

The sandstone counters were recovered from the fills of D-shaped enclosure ditch [1005] in Area D and a boundary ditch just to its south [1541]. Other examples were recovered from the southern limit of the rectangular enclosure in Area C [2050]. They all date from Period 3.3 AD 1-125. The counters are all broadly circular and the edges have been ground down.

The ceramic counters consist of reused sherds of grey ware and a sherd of black burnished ware decorated with latticework (SF 10). SF 11 dates from Period 4.2 AD 125-300, SF 51 and 285 date from Period 4.4 AD 275-400 and the remainder are unstratified. They are all broadly circular, the edges of four of the counters have been ground down. There is no clear evidence of wear on the front and reverse of the counters.

The lead item (SF 79, unstratified), which was possibly used as a counter, is broadly circular and has evidence of an impression on the front face, possibly cloth. The reverse is scratched. It is 27mm in diameter and weighs 38.97 grams. It should be noted that no lead counters were recorded from Colchester and therefore another function for the object should not be discounted.

Tools

Knives and cleavers

SF 59 (Unstratified) Figure 6.10

An almost complete tanged iron knife of Manning Type 11a. The tang is 39.5mm in length and widens towards the blade. The blade is triangular, 128mm in length, 23.5mm wide and has a maximum thickness of 7.5mm tapering to the cutting edge (2mm thick). The knife is 165mm in length, 23.5mm wide and weighs 47 grams.

SF 256 (Context 6021 – Demolition later over Villa Structure {6197}, Period 6 Post-medieval)

A fragment of an iron blade. The fragment is 55mm in length, 29.5mm wide and 6mm thick, it tapers to the cutting edge which is *c.* 4mm thick. The knife weighs 38 grams.

SF 253 (Context 5421 – Fill of N-S ditch [5127] enclosing west side of Villa Structure {6197}, Period 4.4 AD 275-400)

An incomplete iron meat cleaver of Manning Type 2. The socket is *c.* 75mm in length and has an internal diameter of 16.5mm. The surviving section of the blade is broadly triangular, and the blade edge is convex. The cleaver is 155mm in length and weighs 403 grams.

The tip of the blade is missing preventing further definition of the type. The majority of meat cleavers were for butchering meat (Manning 1985: 120).

Shears

Five sets of shears were recovered all of which come from late Roman ditch fills. Four sets come from [3684] and one from nearby ditch fill [4181]. As Manning (1985: 35) notes, shears could have been used for almost all of the tasks that scissors are used for today. The examples fall under Manning Type 2 and Type 3. Type 2 would have been used for tasks such as cutting wool or shearing sheep. Manning Type 3 shears would have been suitable to domestic and personal use. The typology of the shears has also been refined given the limitations of the boundaries of the Manning type 2 and type 3. The condition of the shears post recovery limits further interpretation due to the poor condition of the blades but they appear potentially to be of the Avenches (Medium) form. The spring is thicker and does not widen towards the back similar to Swift's (2017) London type. The poor preservation post recovery limits detailed discussion based on the typology defined by Swift (2017).

SF 102 (Context 3727 – Fill of North-South ditch [3684] entering Area B at northern baulk, Period 4.4 AD 275-400)

An incomplete set of shears in multiple fragments due to corrosion and poor preservation. The shears are probably of Manning Type 2 as they are 160mm in length and the blades appear to be *c.* 90mm in length. The shears consist of a plain U-shaped spring and triangular blades *c.* 20mm wide. The remains weigh 66 grams.

SF 100 (Context 3640 – Fill of ditch [4181] containing Structure {3583}, Period 4.4 AD 275-400)

A complete set of probable shears in multiple fragments due to corrosion and poor preservation. The shears are probably of Manning Type 3 due to the surviving length of the blades. The length of the blades is uncertain due to the lamination and corrosion. The shears consist of a plain U-shaped spring, the remainder of the possible surviving blades are heavily corroded and laminated. The shears are 150mm in length and weigh 87 grams.

SF 103 (Context 3727 – Fill of north-south ditch [3684] entering Area B at northern baulk, Period 4.4 AD 275-400) Figure 6.10

A complete set of shears in multiple fragments due to corrosion and poor preservation. The shears are probably of Manning Type 3 as they are less than 150mm in length. The length of the blades is uncertain due to the lamination and corrosion. The shears consist of a plain Omega shaped spring and triangular blades *c.* 15mm wide. The shears weigh 82 grams.

SF 109 (Context 3727 – Fill of north-south ditch [3684] entering Area B at northern baulk, Period 4.4 AD 275-400)

An incomplete set of shears in multiple fragments due to corrosion and poor preservation. The shears are probably of Manning Type 3. The length of the blades is uncertain due to the lamination and corrosion. The shears consist of a plain Omega shaped spring and triangular blades. The shears are 76mm in surviving length and weigh 39 grams.

SF 214 (Context 3726 – Fill of north-south ditch [3684] entering Area B at northern baulk, Period 4.4 AD 275-400)

An incomplete set of iron shears of Manning Type 3 consisting of a single blade and part of the stem. The blade is broadly triangular. The fragment is 96mm in length and weighs 20 grams.

Sickles and reaping hooks

The sickle found at Lyde Green is of a type which first appeared during the Roman period. As the form did not change into the medieval period, it is possible that the sickle is medieval in date. The reaping hook would have been used for cutting cereals.

SF 317 (Context 1455 – Layer over medieval trackway {1476}, Period 5 medieval)

An incomplete iron sickle of Roman or post-Roman date. The tang is 89mm in surviving length, the blade projects from the tang at a 135-degree angle and is 155mm in surviving length. The blade is curved and triangular in cross section tapering towards the tip where it is 2.5mm thick. The sickle is 239mm in length, 25.5mm wide and weighs 54 grams.

This sickle is consistent with a Manning Type 2 sickle. Later examples from the medieval period exist, such as that from Clarendon Palace, Wiltshire (Schuster *et al.* 2012: fig. 38 no. 13). The balanced shape of the sickle makes it well suited to reaping.

SF 338 (Context 3740 – Layer sealing structure {4196} and containing 12th-13th century AD pottery)

An incomplete tanged iron reaping hook of Manning Type 3. The tang is detached and is *c.* 70mm in length before expanding to form the blade. The blade has an inverted J shape, it is 39.5mm at its greatest width before curving and tapering to the tip. The reaping hook is 177mm in length and weighs 99.57 grams.

Set

SF 316 (Context 1403 – east-west linear stratigraphically between the two phases of 'D'-shaped enclosure, Period 3.2 AD 1-125)

An iron set or wedge for splitting wood. The head is 50mm wide and 35mm thick and tapers to the tip (*c.* 3mm thick). The set is 185mm in length and weighs 1312 grams.

A set was used by a smith to cut red hot metal with a sledgehammer (William Manning pers. comm.). Modern examples are held with an iron handle. Sets of a more elaborate form have been recorded by Manning (1985: A20) from the Coldham Common hoard. William Manning (pers. comm.) also cites further unpublished parallels from the Silchester 1900 hoard and Chedworth villa museum.

Whetstones and rubbing stones

Five sandstone whetstones were recovered from the excavation. Three (SF 318, SF 320 and SF 224) were found in late Iron Age/early Roman contexts (Period 3.3 AD 1-125) and are rod-shaped with an oval cross section (Figure 6.10). They show wear and use on two wide surfaces and one narrow surface. SF 118 is rod-shaped, oval in cross section and from a late Roman phase (4.4 AD 275-400). SF 70 is bar-shaped and rectangular in cross section, it has been heavily used on all surfaces (Figure 6.10). It was recovered from a medieval phase, but a Roman date is suggested. Rod- and bar-shaped whetstones are stone active and would be used to sharpen objects including sickles, reaping hooks and shears. Prolonged use would create a rounded or oval cross section. The late Roman example SF 70 was recovered from ditch [4181] as was the set of shears SF 100.

SF 69 (Context 3616 – Fill of corn dryer flue within enclosure {4219}, Period 4.4 AD 275-400) This object has not been assessed in person. It could have been in use as a tabular whetstone before being reused as part of the structure of the corn dryer. Nine narrow grooves and two deeper grooves are apparent on the photograph. The identification is tentative. Tabular whetstones would be used to sharpen objects such as knives and cleavers.

In addition to the whetstones three rubbing stones are present within the assemblage. Two of the three were associated with Structure {4196}, the third being unstratified. The rubbing stones appear to be large pebbles. Such stones could have been used in a number of manufacturing processes, such as smoothing or working leather and cloth. It is also possible that they could have been utilised as whetstones.

Fasteners and fittings

SF 201 (Context 3881 – Demolition layer associated with Structure {4196}, Period 4.5 AD 300-400)

A copper alloy Roman 'bell-shaped' stud. The stud comprises a circular convex head with a further conical

projection at the centre. To the reverse the stud tapers to 8.5mm. Iron corrosion is visible to the reverse from the remains of an iron shank. The stud is 11.5mm in length, 17mm wide and weighs 4.05 grams.

While their exact purpose is not fully understood, they are believed to have been used on furniture doors and on caskets. Often found in association with northern frontier forts, the studs are known to be in use from the 1st to 4th centuries AD.

SF 83 (Unstratified)

A copper-alloy possible mount or stud. The object is formed from a hemispherical sheet of copper-alloy 24mm in diameter, 9mm high and 1mm thick. The outer face of the object is undecorated. Internally white paste or white corrosion product is visible. The mount weighs 2.12 grams.

SF 2 (Unstratified)

An incomplete iron latchlifter of Roman date. The object consists of a flat handle which is rectangular in cross section and has a curved, upturned stem. The latchlifter is 195mm in length, 14mm wide and weighs 83 grams.

Fifty-one Roman nails and 19 shanks were recovered from the site. One of the shanks might be from a Manning 1a nail. The remainder are all Manning Type 1b nails or incomplete nail shanks. 12 nails and 2 shanks are from the cremation burials and are discussed below in the section on the cremations and inhumations.

The lengths of the complete and almost complete examples of Manning Type 1b nails measure between 20-90mm in length. The quantity reflects the general usefulness and versatility of the smaller Manning 1b nails, but the high proportion of short Manning 1b nails is unusual.

Of the 39 Manning 1b nails 19 (~49%) show evidence of being used. Rhodes' (1991: 132) study of a hoard of nails from the Walbrook Valley highlighted that some nails were unused, others were damaged from insertion, but the majority were damaged from extraction with a nail claw. The majority of the Lyde Green 1b nails have been bent from extraction from timber, or from being poorly inserted, or have marks on the head from hammering.

The quantity of smaller 1b nails and the lack of definitive Manning 1a examples within the assemblage might not necessarily reflect the general number of nails at the villa. It has been argued that larger nails (the most common examples would be Manning 1a) would have had considerable scrap value and would have been an attractive source of raw material for recycling.

Metalworking

Evidence from the site of metalworking generally consists of copper-alloy or lead casting waste as well as a small rectangular lead ingot and a copper-alloy casting jet. The majority are unstratified but suggests small industrial activity took place at the site.

The lead casting waste consists of seven fragments which weigh a total of 254 grams (SF 76, SF 78, SF 120, SF 173, SF 198, SF 251 and SF 287). SF 120 (Context 3880 – Stone floor within Structure {4196}, Period 4.4 AD 275-400) is the only stratified example. SF 75 (Unstratified) is a small lead ingot which measures 60mm in length, 25mm wide and weighs 90 grams.

The copper-alloy casting waste consists of three fragments which weigh a total of 9 grams (SF 169, SF 202 and SF 295), all of which are unstratified. SF 170 (Unstratified) is a casting jet which is oval in plan with a flat top. It has a semi-circular underside that has two rectangular cross-section runners protruding from the base at slight angles that would have led to the moulding. It weighs 80 grams.

Bone working

An antler tine from a Red Deer (SF 66, Context 3584 – Demolition layer over Villa Structure {6197}, medieval). The tine has been deliberately cut and tapers from 22.5mm at the cut to 11mm at the break just below the tip. Similar objects have been defined by Crummy (1983: fig. 182) as antler offcuts. The object indicates bone working activity at the site. The artefact is from a medieval phase.

Lead water pipe
Description by M. Hobson

SF 62, a fragment of split lead pipe of Roman date weighing 3450g, was retrieved from a hole cut through bedrock below the southern wall of the bathhouse structure (Plate 6.3). The pipe measures 620mm in length, with an external diameter of 63mm (Figure 6.12). The lead is roughly 3mm thick. The seam was split along its entire length, leaving a 2cm gap. The internal diameter is 56mm.

Column base
Description by M. Hobson

A simplified, stepped base, with a square lower plinth and two superimposed cylinders with straight sides, corresponding to the tori of an Attic base (Figure 6.12) The object has a surviving height of 27cm. The upper cylinder is elliptical in cross section, with a maximum diameter of 32cm. The surviving width of the plinth is 36cm.



Plate 6.3 Walled cavity {3529} and lead pipe & ceramic drain {3425}, looking south

Quernstones

SF 50 (Context 3480 – Fill of bathhouse plunge pool, Period 4.4 AD 275-400)

A fragment of an upper quern stone of tapered form made of sandstone. The grinding surface is worn with some rotational wear. The unworn pecked surface is visible along the outer edge of the quern. The fragment is 135mm in length, 130mm wide and weighs 1605 grams.

A second quern fragment (SF 324, Context 4033 – Fill of pit [1489] just outside of south tip of D-shaped enclosure [1005], Period 1-125) has not been assessed in person, but has been recorded as a fragment of quern stone weighing 4033 grams.

Miscellaneous

The remainder of the finds from Lyde Green are unidentified or cannot be assigned to a specific category and have thus been divided by material type.

SF 252 is a fragment of copper-alloy rod 33mm in length (Context 5087 – north-south aligned ditch enclosing Villa Structure {6197} on west side, Period 4.4 AD 275-400). Twenty-eight undecorated fragments of copper alloy sheet were recovered from five small finds (SF 155, 273, 284, 308 and 319). Seven further copper-alloy artefacts are undiagnostic (SF 152, SF 153, SF 163, SF 174, SF 185, SF 221 and SF 254).

Two iron rings and one iron loop were recovered (SF 199 and SF 238, SF 80). Such rings could have many functions and also may be of a post-Roman date. Two fragments of iron sheet are also present (SF 107 and SF 279). A further 6 iron objects are unidentified (SF 7, SF 39, SF 81, SF 111, SF 182, and SF 313).

SF 197 (Context 3806 – Fill of ditch [4181] containing Structure {3583}, Period 4.4 AD 275-400) is an undiagnostic lead cast ring. The band is D-shaped in cross section and 7.5mm wide, it weighs 14 grams. SF 168 (Unstratified) is an undiagnostic fragment of lead.

Small finds from the cremations and inhumations

The assemblage of small finds recovered from the cremation burials at Lyde Green contains 12 Manning Type 1b nails, two nail shanks, 18 Manning Type 10 hobnails, several fragments of a worked bone handle and a segmented cylindrical dark blue glass bead.

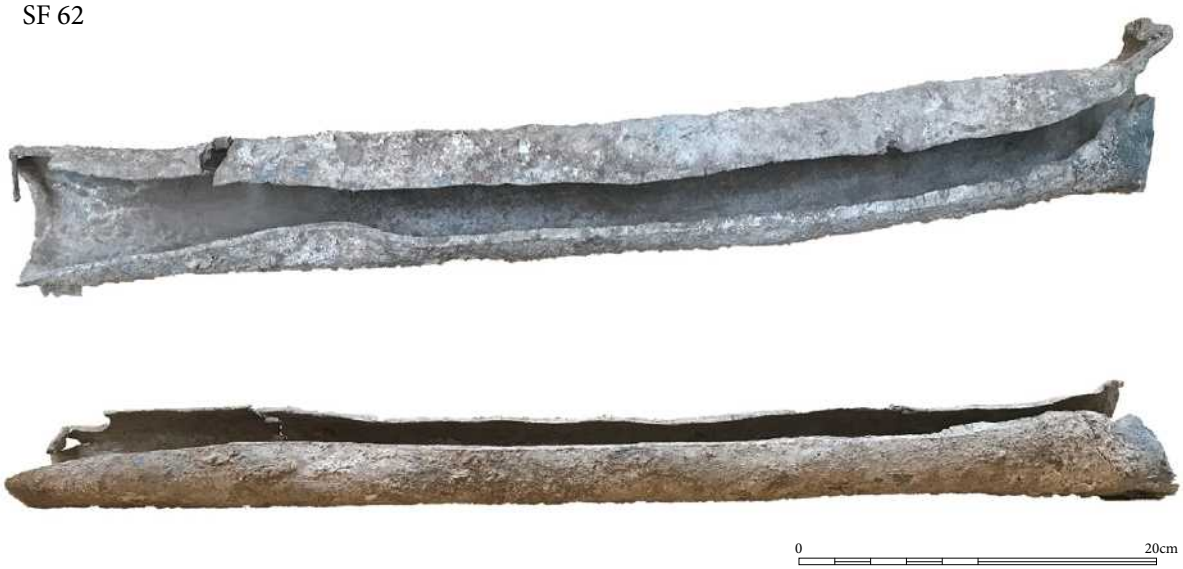




Figure 6.12 Lead pipe (SF 62) found within structure {4213} and column base found within structure {6197}

SF 337 (Context 3240- fill of cremation burial no. 9) Figure 6.9

A segmented cylindrical dark blue glass bead. The internal perforation is 1.25mm in diameter. The bead is 4.5mm in length and weighs 0.06 grams.

A similar bead was recorded from Colchester (Crummy 1983: fig. 36 no. 1347).

SF 218 (Context 3332, fill of urn, cremation burial no. 4. Period 4.2 AD 125-300).

A probable decorated bone handle. The surviving section of the object is incomplete and is in ten fragments. The three largest fragments join. The surviving fragments of the handle are broadly U-shaped in cross section and are decorated with numerous parallel transverse incisions forming an X. There is evidence of burning externally on two fragments, as well as internally on nine. The handle is similar to an example from Scole (Greep 1983: fig. 272 no. 103) and similar sections of sheep metacarpal have been recorded by Greep (1983: fig 356). The cross section of the object does not fit with the recorded examples of veneer from Brougham and Birdoswald and the majority of veneer are produced from antler (Greep 2004 and pers. comm.)

The majority of the Manning Type 1b nails from the cremations formed two broad groups. The first consisted of nails less than 30mm, the latter nails 40-55mm in length. Drawing on recent analysis from Birdoswald and Brougham (Hembrey and Henry 2020) one can suppose that the two groups were used for different purposes. The nails less than 30mm long are broadly consistent with groups from Birdoswald and Brougham where they have been interpreted as potential tacks

for an upholstered bier, or to have been used as part of casket construction to store the redeposited pyre debris (Powell 2010b). It is clear from the bone adhering to the nails from Lyde Green that in all probability these nails were on the pyre. Interestingly, five of the shorter nails are bent. The analysis from Birdoswald suggested that the nails which are over 30mm in length could relate to reused wood as part of the pyre's construction, or construction of the bier. It is suggested that if an upholstered bier was used in the cremations at Lyde Green, these longer nails are perhaps evidence for the presence of reused wood on the pyre, or in the construction of the bier.

Hobnails were recorded from the fill (3328) of the urn (Vessel no. 84) of cremation no. 5. This suggests that the deceased was either clothed on the pyre or that shoes were placed on the pyre as grave goods. Some of the examples are clinched and a number of the hobnails had bone adhered to the corrosion. The hobnails from the cremations measure 19mm to 20mm in length and 10mm to 11.5mm wide. It should be remembered that nailed shoes, although a Roman fashion, were not the only type. Some stitched types did not utilise nails and as such would not leave any trace in the archaeological record (Mould 2004; Powell 2010a).

As noted above, 130 hobnails were found in cist burial 2, located in Area C (Context 3887, Period 4.3 AD 275-325). The nails appear to come from a pair of shoes deposited within the cist. The shoes are fragmented but some of the leather survives (*c.* 7mm thick). The shoes appear to consist of:

SF 122. Fifty-eight hobnails. The largest two shoe fragments contain 18 hobnails each. These are 18.5mm in length and attached through leather.

SF 123. Fifty-four hobnails. The largest shoe fragments contain 17 and 18 hobnails attached through leather).

A further 18 hobnails attached to leather were found within the cist but could not be defined to a particular small find.

Nailed shoes are on the whole relatively rare at forts and major towns, but more abundant in rural cemeteries (Powell 2010a). As no human remains were recovered from the cist this was potentially an unusual burial. The survival of leather but lack of preserved human remains may perhaps support the assertion that the human remains were removed.

Discussion

Those who lived and worked at the site in the Roman period had access to a range of manufactured goods that was greater than those that appear to have been available at the site in the late Iron Age. The visibility of the material culture from the Roman period is a testament to the level of economic activity. It indicates that the site had access to a range of trade networks. Goods consumed at the site consisted of those manufactured locally and regionally, as well as imported. The dragonesque brooch was probably produced in Yorkshire. The Samian repurposed as a spindle whorl originally came from Gaul and the shale for some of the other spindle whorls and bracelets would have come from Kimmeridge in Dorset. The amber for the bead was presumably imported from the Baltic.

Some of the objects are considered as indicators of high status and are often found at Roman villas in the region. In terms of personal adornment, the most common groups are hair pins, bracelets and brooches. The proliferation of the first two groups of objects at villa sites is in part due to a high proportion dating from the 3rd and 4th centuries, when many villas reached their apogee.

For the purposes of consistency and contextualisation the small finds assemblage from Lyde Green has been compared with the assemblages from a selection of villa sites within a 17km radius. The full list of these is included in the discussion in Chapter 8. The data used within this discussion is derived from the Roman Rural Settlement project and brooches were compared using the dataset compiled by Mackreth (2011). Naturally there are some limitations on our ability to draw comparisons. The corpus of nearby villas includes small finds assemblages for which the data, where available, vary in quality. To give one example, although we know hair pins from North Wraxall were recovered, the material and quantity has not been published. As a result, it has not been possible to include these in the discussion. Another example is provided by the site at Keynsham. Here, apart from the well-recorded assemblage of brooches, information on the small finds greatly varies in quality. There is also a lack of information regarding stratigraphic context for the brooch assemblage recorded by Mackreth (2011) at Keynsham villa, and the same is true for the site at Gatcombe. This makes it impossible to compare the late deposition of some of the examples from Lyde Green. Consequently, the sites included in the following discussion place Lyde Green in its wider context. These are Box, Brislington, Gatcombe, Keynsham and Wortley. Gatcombe has subsequently been described as a walled settlement enclosing an area of *c.* 7 hectares.

Nonetheless, the group of twenty brooches recovered from Lyde Green allows us to draw comparisons with other villa sites. In his corpus, Mackreth (2011) includes 8 brooches from Gatcombe and 32 from Keynsham villa.

There are clear similarities with two of the brooches from Lyde Green and those from Keynsham (a Polden Hill Type 5.a4 and a Type 8). There are also other similarities between the ranges of brooches from the three sites where there is often a western or a south-western focus in distribution. Keynsham includes a crossbow brooch, otherwise each appears to follow the pattern one might expect: a proliferation of bow brooches and a lower quantity of plate brooches and other types.

On the whole the assemblage from Lyde Green includes practical rather than decorative types. Perhaps the most interesting example is SF 60, a Colchester derivative brooch, where the reverse sides of the wings have been decorated with a sprung pin mechanism even though the pin is hinged. Although parallels are known on other brooch types, such as the applied hook brooch, there is a question that should be raised. Why would an element of the brooch, which would not be seen when worn, be decorated in such a manner? This particular brooch should perhaps be considered as a transitional type between the two forms of pin mechanism.

The majority of the bow brooches could be argued as being functional examples rather than solely decorative. This is as potentially thick cloth could be secured in place to hold a garment together, rather than simply being a more decorative piece such as the dragonesque brooch or the disc and plate brooches. The wheel brooch perhaps adds weight to the argument made by Mackreth (2011), that such brooches of the gilded plate type should be assigned a slightly earlier date than the 4th century date that has been assigned in the past.

Analysis of the stratigraphic context of the brooch finds highlights the fact that a brooch's date of manufacture will not necessarily tally closely with the date of its deposition. SF 60, probably produced in the 1st century AD, is almost complete with only a small fragment of the pin missing but was deposited in the late Roman period in the foundation layer of the bathhouse (AD 275-400). There is evidence of a potential repair on one brooch, which appears to have required the reverse of the wings to have been filed down to fit a replacement spring mechanism. Given that brooches are often seen as mass produced objects with a short use-life in this period, such repairs highlight that we should not always view them in such a manner.

Hair pins are an important indicator of status and are a regular part of the small finds assemblages from villas in the region (Brindle 2018: 14). Cool (2010: 307) has suggested that in burial contexts at Lankhills, hair pins were a fashion for girls and very few adults were buried with them. Four bone hair pins were recorded from Lyde Green and provide an insight into the fashions of the period i.e. that Roman hairstyles were adopted, with hair being worn up and fastened with hair pins (Cool 2000: 48). The simple decoration on SF 267 and also the decoration on SF 116 imply that these items were designed to be seen. There are higher quantities of hair pins from Gatcombe and the villas at Brislington and Wortley, whereas two were recorded at Box. The examples from Lyde Green were produced with a blade and these cuts have often not been removed with a file. SF 116 (Unstratified) has also been potentially re-sharpened suggesting that it was perhaps extensively used.

It has been noted that widespread use of copper-alloy bracelets does not occur until the 4th century (Cool 2000: 49). Cool (1983) divides bracelets into various groups, the cable twist bracelets and those which she described as light bangles. In the 4th century there appears to have been a gradual alteration in the ratio between the two types. The ratio of cable twist bracelets declines from 1:1 in the mid-4th century to 1:3 in the late 4th century. As grave goods, bracelets could be deposited individually or as part of a group. For example, at Lankhills the excavations by Oxford Archaeology uncovered graves with numbers ranging from a single bracelet (including an adult female in Grave 87) to those with as many as 13 (made of various materials in a child's grave 920) and 17 bracelets (made of various materials in Grave 985 for an adolescent female). In this context the number of fragments and range of materials could have in theory been worn in groups. The form and decoration of the bracelets when worn in multiples would have caught the light and jangled (Cool 2010). Outside of a funerary context, it is likely that bracelets entered the archaeological record as chance losses or breakages. From the comparative sites, 12 copper-alloy bracelets were recorded at Gatcombe and 12 at Wortley villa. At Lyde Green eight copper-alloy and four shale bracelets were recorded. Two examples appear to have been for children. It is perhaps worth noting that a common type of bracelet for the region, known as a crenelated, or cog wheel bracelet, was not recorded from Lyde Green.

In conjunction with personal ornaments there is evidence of the use of toilet implements at Lyde Green, including a nail cleaner and two sets of tweezers. Within Roman Britain the distribution of nail cleaners at rural and villa sites is broadly along the Central Belt, with a concentration in Somerset and Gloucestershire. This in part reflects the distribution of villas. Eckardt and Crummy (2008: 118) have argued that this should not be interpreted as an indication that this region was more integrated into the Roman empire than other parts of Britain. Rather, nail cleaners represented a British social practice, which continued in use from the La Tène period for a prolonged period. This was in contrast to the continent, where such items were not

manufactured in large quantities. In this respect, how the inhabitants of Roman Britain presented themselves through the use of personal adornments and how status was communicated through objects is only part of the picture. When considering personal ornament and toilet implements in conjunction, we see evidence of objects within the assemblage with a clear Roman influence both in form and the style of dress but also, in parallel, objects that represent British social practice.

Five spindle whorls, including two shale, two ceramic and one possible lead example, were recorded from Lyde Green. Spindle whorls were recorded at Wortley villa and also at Gatcombe and a shale spindle whorl was recorded from Kings Weston. Shale spindle whorls have been described as high-status accoutrements. They are often recorded from the counties of Dorset, Somerset and Wiltshire. The spindle whorl from a reused piece of Samian ware is perhaps unusual as it is from an early Roman phase. Cool (2000: 53) in a discussion of a select sample of 65 pottery spindle whorls from several sites (of which 17 were Samian) noted that the Samian examples were conspicuously absent from 1st and 2nd century contexts. It seems from the small sample that the majority of such reused Samian spindle whorls were produced in the 4th century. In contrast the 40 black/grey examples were manufactured throughout the Roman period (Cool 2000: 53).

In the Roman period iron became more commonly available and was utilised to produce a variety of tools from the site. The tools include a blacksmith's set, which would have been used to cut hot metal when struck with a sledgehammer. Such objects add further support to the evidence that suggests a range of industrial activities including iron working and iron smelting were undertaken at the site. Evidence of potential manufacture within the small finds assemblage is not limited to smithing tools such as the set. Fragments of casting waste of various metals also indicate metalworking and the example of antler tine had been prepared to be worked.

Other iron tools include a sickle, a reaping hook, knives, a cleaver and several pairs of shears. The quantity of whetstones, and the wear on them, indicates that they were used to sharpen a range of tools that one imagines were kept in regular use. Such tools could have been used for a range of activities but do offer a hint of the type of activity that took place at the site. The quantity of pairs of shears found in a single context is unusual and worth noting. Particularly as a whetstone (SF 70) was found in a nearby context along with another set of shears.

The detailed work by Swift (2017) has shown that shears can be set to the left or the right (depending on which blade overlaps). Left set blades are often a feature of shears used to shear sheep (Swift 2017: 65). The condition of the ironwork prevents us from saying with any certainty the function of this interesting group of shears. This is because the original length of the shears and the lengths of the blades and if the ends are pointed or blunted are often uncertain. They do, however, appear to have been utilised for a range of function and we can deduce some conclusions. The Omega spring was an Iron Age development, which reduces stress on the handle, but requires greater pressure. The Omega spring would be suited for use for a wide range of purposes on resistant materials (Swift 2017: 97). U-shaped blades would have been more suited for thin or delicate materials (Swift 2017: 92). The surviving blades often appear to be narrow with shorter blades that would have been useful for short snips rather than long cuts. If the blade was pointed, such narrow blades would be suited for grooming. With the examples from Lyde Green we should perhaps consider them as multi-purpose. The sets of shears could have been used to cut thin, as well as thicker, more resistant materials. Depending on the tip of the blade grooming should also be considered a possibility. The evidence suggests that they would not have been well suited for shearing, although given the poor condition post-recovery this option cannot be completely ruled out.

Analysis by Lodwick and Brindle (2017: 46) has highlighted that sickles and reaping hooks were somewhat uncommon finds recorded as part of the Roman Rural Settlement project. Both sickles and reaping hooks were recorded from *c.* 2 per cent of sites within the database. They were better represented from villas and nucleated settlements. The study focused on taxa height based on the lowest growing weeks within fine sieved samples. Most areas included low growing taxa such as *Prunella vulgaris* (self-heal) and *Rumex acetosella* (sheep's sorrel). This indicates that across Britain sickles and reaping hooks were used to cut low on the stalk when harvesting (Lodwick and Brindle 2017: 47). If this technique was utilised at the site it would mean that straw would have been an abundant resource, used for a range of purposes such as animal fodder.

There is evidence of repairs to both metalwork and pottery vessels. Ultimately these objects were considered important enough to repair in some form for reuse. Within the assemblage broken objects, particularly sherds of pottery were refashioned into new artefacts to be used for different purposes. These include the ceramic spindle whorls and the counters.

The counters offer a small glimpse into recreation at the site. Unlike examples from Colchester (Crummy 1983) there is no evidence of wear through use on the faces of the counters, although the edges have been ground on a number of examples. This, and the small

quantity recovered, limits further interpretation of these objects.

The small finds assemblage from Lyde Green when considered as a whole provides an insight into the trade networks available to those who lived and worked at the site as well as how they chose to present themselves and their status. The assemblage also highlights the trade links in the region, the increased availability of material culture and manufactured goods in the Roman period and how the preference for various objects ebbed and flowed. As highlighted at the start of the chapter the small finds suggest that use of the site continued in some form into the 5th century.

6.5. Coins

By Frank Giecco & Megan Stoakley

Introduction

Seventy-seven Roman coins were recovered during the excavations (Table 6.22).[1] All were made of copper alloy, with the exception of SF 134, a denarius, and SF 248, a siliqua. The full list of coins is presented in Table 6.22. The condition of the copper alloy coins was universally poor. Forty-two survived in very poor condition and a further five were unidentifiable. The composition of the assemblage is discussed, making use of the broader chronological divisions originally used by Reece (Reece 1991), developed further by Moorhead (2015) and used in the recent in volume *The Rural Economy of Roman Britain* (Figure 6.13). The context of the stratified coins is presented (Table 6.21), before comparisons with ten other villa sites in the region are drawn. The comparison makes use of the case study on the coinage of the Western Central Belt undertaken by Tom Brindle (Allen *et al.* 2017: 249-264).

The composition of the assemblage

Coin period A (pre-AD 260)

The earliest identifiable coin is Antonine (Table 6.22), a sestertius of Faustina Junior (SF 133) dating to *c.* AD 154-156 (RIC 1393). The next identifiable coin chronologically is a denarius of Julia Domna (SF 134) dating to AD 192-222. Both these coins are very worn. They were unstratified but may have been in circulation for a considerable period of time before being lost. Mid-third century coins from Reece periods 11 and 12 are often poorly represented in assemblages and are totally absent from the Lyde Green coinage.

Coin period B (AD 260-296)

Reece periods 13 (7 coins) and 14 (14 coins) mark the beginning of significant coin loss at the site. These are radiates, some of which were unofficial copies, and

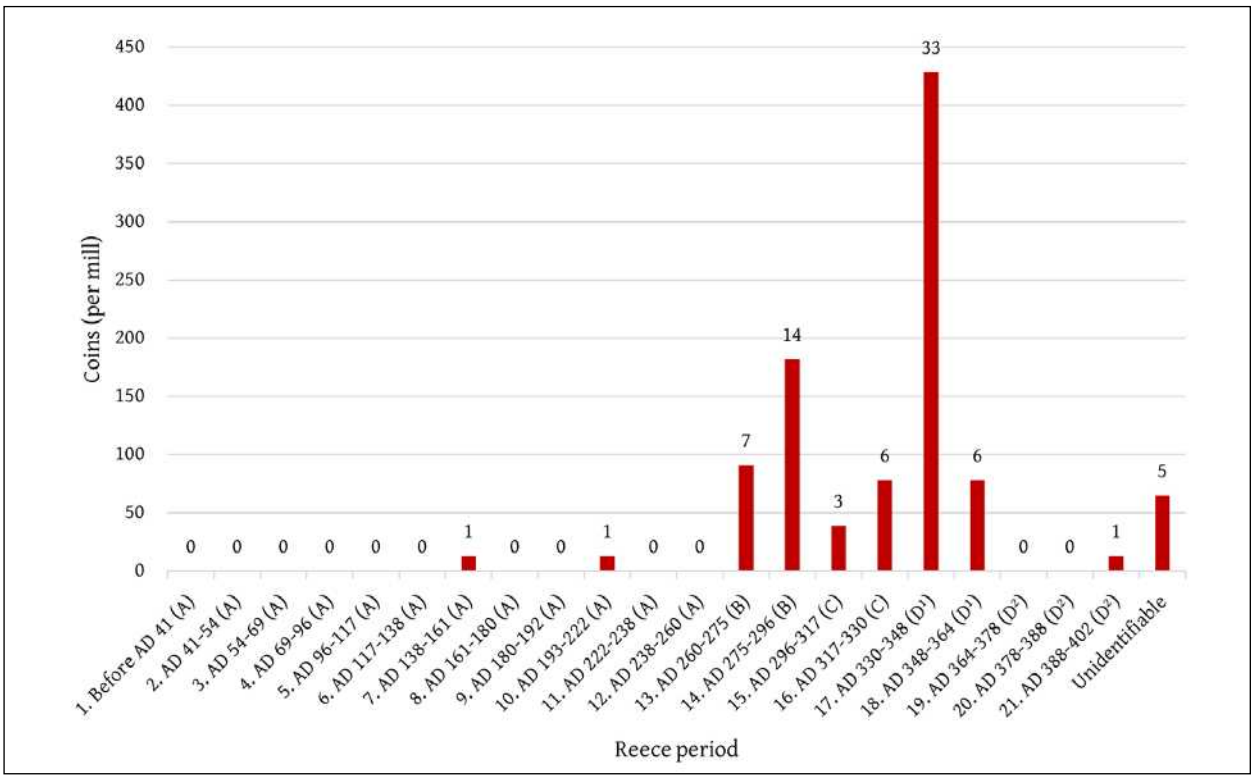


Figure 6.13 The 77 coins from Lyde Green, by Reece period

[1] Three other coins were also found: a silver-cut long cross farthing of Henry III (1247-1272) and two post-medieval pennies.

span the period AD 260-295. Of the 21 coins in this category, 11 were in such poor condition that little can be said about them. Of the remaining ten coins, eight are of the emperors of the breakaway Gallic empire: one of Victorinus, six of Tetricus I (3 of which are unofficial copies), and one of Tetricus II. The final two are a coin of the official emperor Gallienus and one of Carausius. The latter relates to this naval commander's breakaway empire, which spanned Britannia and northern Gaul. The coin has been pierced, perhaps in order for it to be worn as a pendant.

Coin period C (AD 296-330)

Three coins were recorded from the site for Reece period 15 and six for Reece period 16. These coins demonstrate continued occupation on the site, with the lower levels of coin loss likely representing fewer low denomination coins in circulation. A single nummus of the *Beta Tranqvilitas* issue represents the final output of the mint of London, prior to its closure early in AD 325.

Coin period D^1 (330-364)

Consistent with the greatest increase in coin circulation within Roman Britain, Reece period 17 (AD 330-348) has the greatest number of coins, with 33 recorded within the assemblage. There is a drop-off, however, in Reece period 18 (AD 348-364), for which only six are recorded. This possible indication of a decline in activity at the site in the second half of the 4th century appears to mirror the pattern observed in the ceramic assemblage (Section 6.2).

Coin period D^2 (AD 364-402)

The lack of coinage from Lyde Green in the second half of the 4th century is interesting, as a spike in coin loss during Reece period 19 has been recorded in the region. This could be further evidence for decline during this period. A single coin from Reece period 21 (AD 388-402), however, demonstrates that the site had not been completely abandoned towards the end of the 4th century.

The stratified coins

The generally poor condition of the coins was a result of the acidic nature of the clay soils and the fact that most of the coins were recovered from the plough soil. Twenty-four of the coins, however, were found in stratified deposits. Most of these, demolition layers and robber trenches, for example, developed following the abandonment of the site (Table 6.21).

The stratigraphic position of SF 119, dating to AD 270-274, is worthy of note. It was found in a gully pre-dating the corn dryer within enclosure {4219} and provides a terminus post quem of AD 270 for the construction of the corn dryer. Somewhat unfortunately, datable material in the construction deposits of the main villa building was extremely difficult to identify. As a result, no firm terminus post quem for its construction could be established. It seems most probable that the villa was built in the mid-late 3rd century AD. SF 299 was found at the horizon between a construction deposit and an occupation layer associated with the main villa building. The coin is in very poor condition but identifiable as belonging to Reece period 17 (AD 330-348).

Regional context

Figure 6.14 compares the coin assemblage from Lyde Green with those from 10 other villa sites within the region: Barnsley Park (635 coins), Shakenoak (544 coins), Chedworth (309 coins), Frocester (702 coins), Wortley (24 coins), Atworth (195 coins), Kingsweston (84 coins), Ditchley (52 coins), Stoke Gifford (169), and Kingscote (2947 coins). The list of chosen villa sites is by no means exhaustive but allows a statistically valid dataset to be created and useful comparative patterns to be observed. The data for seven of these sites is taken from Reece's comparative study of villa assemblages (Reece 1988) and for the other three, either from unpublished client reports or published monographs (Brett and Brindle 2018; Timby 1998). Further useful comparison can be made with the recently published study of the coinage from rural sites within the Western Central Belt (Allen *et al.* 2017: 249-264).

The main difference between the Lyde Green assemblage and those chosen for comparison is the lack of coins within the AD 364-402 date range. In all the other regional assemblages chosen, coins minted within this period constitute a significant proportion of the assemblage. The contrast also exists between Lyde Green and a larger sample of villas from Somerset, Gloucestershire and Wiltshire, taken from the Rural Settlement of Roman Britain project's online database. Indications of decline in the second half of the 4th century at Lyde Green are thus recognisable in the coin data, and this chronological pattern has also been highlighted by Ed McSloy in his analysis of the ceramic assemblage (Section 6.2).

In other respects, the coin assemblage from Lyde Green is more typical. The small number of coins from Period A (Reece Periods 1 to 12), for example, is mirrored in the regional dataset, with only 2.3% of coins predating AD 260. This matches the findings published in *The Rural Economy of Roman Britain*; in a dataset of 376 rural settlements within the Western Central Belt, villas were found to have on average less than 5% of their coins from within Coin period A (Allen *et al.* 2017: 249-264, fig. 6.15). When seeking

Table 6.21 List of stratified coins

SF no.	Reece period	Period/Phase	Context description
53	13 (AD 260-275)	3.3 Late Iron Age/Early Romano-British (AD 1-125)	Fill of N-S ditch [3029], just east of Structure {4226}
22	17 (AD 330-348)	4.4 Late Romano-British (AD 275-400)	Layer associated with bathhouse well [3222], cut by one of its recuts?
24	17 (AD 330-348)	4.4 Late Romano-British (AD 275-400)	Fill of bathhouse plunge pool
37	14 (AD 275-296)	4.4 Late Romano-British (AD 275-400)	Fill of bathhouse plunge pool
38	14 (AD 275-296)	4.4 Late Romano-British (AD 275-400)	Fill of bathhouse plunge pool
94	17 (AD 330-348)	4.4 Late Romano-British (AD 275-400)	Fill of fire pit for bathhouse
95	18 (AD 348-364)	4.4 Late Romano-British (AD 275-400)	Fill of fire pit for bathhouse
96	17 (AD 330-348)	4.4 Late Romano-British (AD 275-400)	Fill of fire pit for bathhouse
97	17 (AD 330-348)	4.4 Late Romano-British (AD 275-400)	Fill of fire pit for bathhouse
119	13 (AD 260-275)	4.4 Late Romano-British (AD 275-400)	Gully within corn dryer enclosure {4219} (provides terminus post quem for corn dryer)
210	17 (AD 330-348)	4.4 Late Romano-British (AD 275-400)	Fill of possible Cremation no. 9 which had no urn or human bone, just NE of Structure {4196}, within the corner of its enclosure
299	17 (AD 330-348)	4.4 Late Romano-British (AD 275-400)	Occupation layer of Villa Structure {6197}
300	17 (AD 330-348)	4.4 Late Romano-British (AD 275-400)	Posthole within Villa Structure {6197}
101	17 (AD 330-348)	4.5 Late Romano-British (AD 300-400)	Demolition layer overlying main Villa Structure {6197}
115	13 (AD 260-275)	4.5 Late Romano-British (AD 300-400)	Demolition layer over Structure {4196}
196	17 (AD 330-348)	4.5 Late Romano-British (AD 300-400)	Lowest fill excavated in bathhouse well [3222], depth 5m
266	Unidentifiable	4.5 Late Romano-British (AD 300-400)	Demolition layer within Villa Structure {6197}
184	21 (AD 388-402)	5 Medieval	Fill of a robber trench that removed foundations of main Villa Structure {6197}
260	17 (AD 330-348)	5 Medieval	Fill of Pit [6058] cut into main Villa Structure {6197} and containing sherds of Medieval pottery
274	17 (AD 330-348)	5 Medieval	Fill of a robber trench that removed foundations of main Villa Structure {6197}
298	17 (AD 330-348)	5 Medieval	Fill of a robber trench that removed foundations of main Villa Structure {6197}
12	Unidentifiable	Unphased	Treebowl
265	16 (AD 317-330)	6 Post-medieval	Stone filled drain
261	18 (AD 348-364)	Modern	Layer of upcast from modern service trench in vicinity of Villa Structure {6197}

explanations for this pattern it is often noted that many villas were constructed during the Late Roman period. While this is true at Lyde Green, occupation at the site is clear from the 1st century AD onwards. One must look, therefore, to a change in function to explain why coin loss increased. This could be, for example, the institution of a periodic market or fair which came along with the new organisation of the site and the construction of a villa. Equally, it may be the loss of such function that one can detect in the middle of the 4th century. The site seems not to have been abandoned until some decades later, perhaps early in the 5th century, although it may have ceased to function as a villa estate by this time.

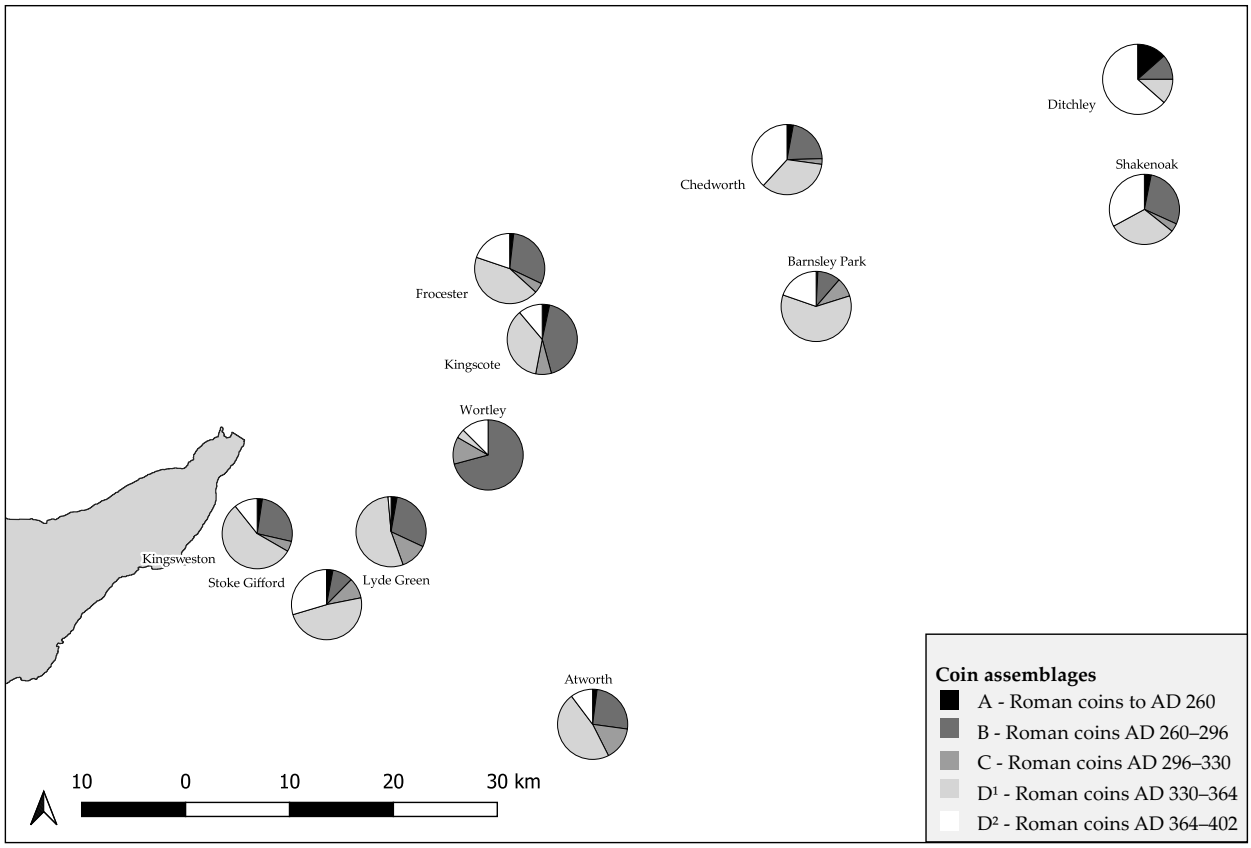


Figure 6.14 Comparison of the coins assemblage from Lyde Green with those from ten other villa sites in the region

Table 6.22 Roman coins found during the excavations at Lyde Green

SF no.	Ruler	Denomination	Reverse type/comment	Mint	Date	RIC
133	Faustina II	Sestertius	Rev. Diana stg. Very worn	Rome	AD 161-175	III 1630
134	Geta	Denarius	Ag Denarii. Geta as Augustus	Rome	AD 210	IV 70b; RSC 140
145	Gallienus	Nummus	Very poor condition, illegible	unident.	AD 253-268	N.A.
53	Tetricus I	Radiate	Very poor condition, illegible	unident.	AD 270-274	N.A.
86	Tetricus I	Radiate	Mars advancing with spear and trophy	Gallic mint I	AD 270-274	V¹ 94
89	Gallienus	Radiate	Felicitas stg. Officiana 3	Rome	AD261-262	V² 188-9;
90	Gallienus	Radiate	Pegasus springing r. SOLI CONS AVG. Officiana 9	Rome	AD 267-268	V¹ 283-284
119	Tetricus I	Radiate	Very poor condition, illegible	unident.	AD 271-274	N.A.
142	Victorinus	Radiate	VIRTUS AVG VIRTVS STg	Gallic mint I	AD 269-271	V¹ 78
236	Tetricus II	Radiate	PIETAS AVG - emblems of priestly colleges. Very worn.	Gallic mint I	AD 272-274	V¹ 255. C48,53.
115	Tetricus I	Radiate	Very poor condition, illegible	unident.	AD 271-274	N.A.
143	Tetricus I	Radiate	Very poor condition, illegible	unident.	AD 271-274	N.A.
146	Tetricus I	Radiate	Very poor condition SALVS AVG	unident.	AD 271-274	N.A.
37	uncertain	Radiate	Very poor condition, illegible	unident.	AD 275-296?	N.A.
38	uncertain	Radiate	Very poor condition, illegible	unident.	AD 275-296?	N.A.
87	Carausius	Billon Radiate	Felicitas standing. Pierced for use a pendant	London	AD 290-291	V² p466, 30 var. C64
92	uncertain	Radiate	Very poor condition, illegible	unident.	AD 275-296?	N.A.
144	uncertain	Radiate	Very poor condition, illegible	unident.	AD 275-296?	N.A.
150	uncertain	Radiate	Very poor condition, illegible	unident.	AD 275-296?	N.A.

SF no.	Ruler	Denomination	Reverse type/comment	Mint	Date	RIC
165	uncertain	Radiate	Very poor condition, illegible	unident.	AD 275-296?	N.A.
232	uncertain	Radiate	Fragment of coin. Very poor condition, illegible	unident.	AD 275-296?	N.A.
239	uncertain	Radiate	Very poor condition, illegible	unident.	AD 275-296?	N.A.
293	uncertain	Radiate	Very poor condition, illegible	unident.	AD 275-296?	N.A.
297	uncertain	Radiate	Very poor condition, illegible	unident.	AD 275-296?	N.A.
93	Maximian	Nummus	GENIO POPVLI ROMANI Genis standing PL in ex no officina mark legible	Lyon	AD 298	VI p244-245, 29b, 44b
139	Maximinus II	Nummus	SOLI INVICTO COMITI. Sol stg. PLG mint mark. T-F across field	London	AD 310	VI p133, 121a, 122-124
141	Constantine I	Nummus	Very poor condition, illegible	unident.	AD 307-316	N.A.
17	Constantine I	Nummus	BETA TRANQVILLITAS Altar inscription. VO/TIS/XX. TR in ex	Trier	AD 321	VII p191, 318
91	Constantine I	Nummus	BETA TRANQVILLITAS Altar inscription. VOT/IS/XX. PLON in ex. F-B in field	London	AD 322-323	VII 112. 240
136	Constantine I	Nummus	GLORIA EXERCITVS. Soldier standing facing right resting on spear and shield. CONS in ex. Officina illegible. Very worn	Arles	AD 327-328	VII p572, 16
147	Constantine I	Nummus	Very poor condition. BETA TRANQVILLITAS issue. Altar inscription. VO/TIS/XX, globe on altar	unident.	AD 320-323	N.A.
166	Constantine I	Nummus	VICTE LAETAE PRINC PERP. Two victoris stg facing each other shield between them incribed VOT/PR. SIS in ex. Officina mark illegible	Siscia	AD 319-20	VII p435-436 and 95
265	Constantine I	Nummus	GLORIA EXERCITVS. Soldier standing facing right resting on spear and shield. CONS in ex. Officina 3. Worn.	Arles	AD 327-328	VII p572
299	House of Constantine.	Nummus	Tiny flan 5mm diam. Diad.hd .r. Local copy. Very poor condition, illegible	unident.	AD 330+?	N.A.
22	Constantine I	Nummus	GLORIA EXERCITVS issue, 2 soldiers and 2 standards. TR in ex	Trier	AD 333-334	VII p218
24	Constantine I	Nummus	GLORIA EXERCITVS issue, 2 soldiers and 2 standards. TR in ex star before officina symbol P	Trier	AD 332-333	VII p216-17, 537-8 and 544
85	Constantine I	Nummus	GLORIA EXERCITVS issue, 2 soldiers and 2 standards	unident.	AD 330-335	N.A.
94	Constantine I	Nummus	GLORIA EXERCITVS issue, 2 soldiers and 1 standard. TR in ex followed by officina mark P	Trier	AS 336-337	VII p233. 590
96	Constantine I	Nummus	VRBS ROMA. She wolf stg. Suckling the twins Romulus and Remus. Mint mark TRP. 1st officina of the Trier mint	Trier	AD 330-331	VII p214-215, 522 and 529
97	House of Constantine.	Nummus	Very poor condition, illegible	unident.	AD 330s	N.A.
101	House of Constantine	Nummus	Very poor condition, illegible	unident.	AD 330s	N.A.
106	House of Constantine.	Nummus	GLORIA EXERCITVS issue. 2 soldiers and 2 standards. Very poor condition	unident.	AD 330-335	N.A.
131	Constantine I	Nummus	VRBS ROMA. She wolf stg. Suckling the twins Romulus and Remus. Mint mark TRP. 1st officina of the Trier mint	unident.	AD 330-331	VII p214-215, 522 and 529

SF no.	Ruler	Denomination	Reverse type/comment	Mint	Date	RIC
135	Constantine I	Nummus	CONSTANTINOPOLIS issue. Victory standing. Very poor condition	unident.	AD 330-331	N.A.
137	Constantine I	Nummus	GLORIA EXERCITVS issue. Officina mark P folowed by TR in ex.Officina 1. Mint of Trier	Trier	AD 330-331	VII p214-215, 518-519 and 525-526
140	Constantine II	Nummus	GLORIA EXERCITVS issue. 2 soldiers and 2 standards. Officiana I	Trier	AD 330-331	VIII p214-15,521 and 528
196	House of Constantine	Nummus	Very abraded	unident.	AD 330-340?	N.A.
161	Constantine I	Nummus	GLORIA EXERCITVS issue. Cross between standards	Aquileia	AD 334-335	VII p407, 118 and 124
200	Constantine I	Nummus	GLORIA EXERCITVS issue. Two soldiers standing with one standard. offiicina mark preceded by star. Lyon mint second workshop	Lyon	AD 334-335	N.A.
209	Constantine I	Nummus	VRBS ROMA. She wolf stg. Suckling the twins Romulus and Remus. TR in ex followed by officina mark P. Second workshop	Trier	AD 333-334	VII p214-215, 522
210	House of Constantine	Nummus	Illegible Fragment in poor condition	unident.	AD 330-340?	N.A.
211	House of Constantine	Nummus	GLORIA EXERCITVS issue. Fragment, very corroded	unident.	AD 330-335	N.A.
235	Constantine I	Nummus	Gloria Exercitus issue. wo soldiers standing with one standard. Poor strike with no mint mark on flan	unident.	AD 336-337	N.A.
240	House of Constantine.	Nummus	Illegible. Very corroded	unident.	AD 330-340	N.A.
243	Constantine I	Nummus	GLORIA EXERCITVS issue. TR mint mark	Trier	AD 336-337	VII p223, 590
244	Constantine I	Nummus	GLORIA EXERCITVS issue. Two soldiers and one standard. Little wear on coin. TRP mint mark = Officiana one	Trier	AD 336-337	VII p223
245	House of Constantine issue	Nummus	Very corroded & worn coin. From size of flan and fabric looks to be Mid 4th century House of Constantine issue	unident.	AD 330-340	N.A.
247	Constantine I	Nummus	GLORIA EXERCITVS issue. Two soldiers standing with one standard. TR in ex	Trier	AD 336-337	VII p223, 590 16361
260	Constantine I	Nummus	CONSTANTINOPOLIS issue. Victory standing. LG in ex followed by officina mark P. Little wear	Lyon	AD 330	VII p138, 241
274	Constantine I	Nummus	VRBS ROMA. She wolf stg. Suckling the twins Romulus and Remus. TR in ex followed by dot and officina mark P. Second workshop	Trier	AD 332-333	VII p217, 542 and 547
289	Constantine I	Nummus	GLORIA EXERCITVS - Very crude local copy. Late 330s in date of Constantine the Great	unident.	AD 330-340	N.A.
290	Constantine I	Nummus	GLORIA EXERCITVS. Two standards, two soldiers facing each other. Very corroded	unident.	AD 330-335	N.A.
296	House of Constantine.	Nummus	Two standards two soldiers standing. Gloria Exercitvs issue. Very corroded. No mint mark on flan	unident.	AD 330-335	N.A.

SF no.	Ruler	Denomination	Reverse type/comment	Mint	Date	RIC
298	House of Constantine	Nummus	VRBS ROMA. She-wolf standing suckling Romulus & Remus; 2 stars above. PLG mint = Officiana 1 of mint of Lyon	Lyon	AD 330	VII p138, 242
300	Constantine I	Nummus	GLORIA EXERCITVS; Very poor condition. Two soldiers and one standard. Very corroded	unident.	AD 335-340	N.A.
88	House of Constantine	Nummus	Crude local Imitation, of Fel Temp Reparatio issue. Very poor condition	unident.	AD 345-350	N.A.
95	Constantius II	Billon quarter maiorina	Radiate phoenix on globe. Very poor condition	unident.	AD 348-349	VIII p154, 231, 233, 235 and 237
138	Constantius II	Billon quarter maiorina	Radiate Phoenix standing on globe. Fel Temp Reparatio issue	Trier	AD 348-350	VIII p154, 233
149	Constantius II	Quarter maiorina	Phoenix on globe, very worn. Could be Fel Temp Reparatio. Possibly Mint of Trier. Very poor condition	Trier?	AD 348-349	VIII p154, 231, 233, 235 and 237
248	Julian II	Silliqua	Fragments of silver coin (incomplete). Obverse - VOTIS V MVLTIS X in four lines within wreath. Reverse - DN CL NIANVS AVG pearl diademed, draped & culrassed bust to right	Rome	AD 360-363	VIII 365
261	Constans	Billon quarter maiorina	Very corroded. Very small flan Ae4. Possible phoenix.	unident.	AD 348-349	N.A.
184	Theodosius	Half nummus	Victory advancing. Probably salvs rei pv blicae issue. Very poor condition	unident.	AD 388-395	N.A.
12	uncertain	unidentifiable	Very poor condition, illegible	unident.	N.A.	N.A.
130	uncertain	Radiate	Local copy. Quarter cut coin	unident.	N.A.	N.A.
132	uncertain	unidentifiable	Very poor condition, illegible	unident.	N.A.	N.A.
246	uncertain	unidentifiable	Very poor condition, illegible	unident.	N.A.	N.A.
266	uncertain	unidentifiable	Very poor condition, illegible	unident.	N.A.	N.A.

6.6. Iron-working evidence

By Gerry McDonnell

The text included for publication here is a summary of the report completed by Dr Gerry McDonnell and describes the assemblage of metal working debris recovered from excavation areas A, B and C. The assemblage comprises *c.* 94kg of hand-recovered macro-slag and 610 samples of magnetic fraction that were extracted during the environmental sieving programme. A far smaller amount of slag (*c.* 2kg) was recovered from 8 contexts during the excavations in areas D and E. Much of the latter material was residual, found in layers which also contained Post-medieval finds. It was decided that only the assemblage from areas A, B and C, which relates to Romano-British iron production and iron-working, should be subjected to detailed analysis following the guidelines issued by English Heritage (Dungworth 2015: 13-14). McDonnell's report also drew on evidence collected from a number of samples through the use of a hand-held x-ray fluorescence spectrometer.

The macro-slags were visually examined and classified into twelve types and listed by context. The totals of each slag-type are presented in Table 6.23.

Table 6.23 Total count and weight of each slag type

Slag Type	Count	Weight (grams)
Hearth Bottom	4	1329
Smithing Slag	250	5974
Furnace Base	3	9376
Tap Slag	915	46,259
Smelting Slag	163	21,598
Hearth/Furnace Lining	76	5607
Fired clay	3	27
Ore	2	367
High (Metallic) Iron Slag	5	968
Iron Metal	1	70
Other Weight		115
Crucible	1	8
Burnt Organic Material	37	196

Iron smelting

Iron smelting was taking place at Lyde Green during the Romano-British period, a focus of which appears to have been close to the northern limit of Excavation Area B. The assemblage is dominated by iron smelting slags i.e. furnace bases, tap slag and smelting slag. These weighed a total of 77kg forming 84% of the total assemblage and 90% of the materials classed as slag. The major slag type is classic tap slag, forming 50% of the total. The tap slags in general are smooth and ropey, with flowed upper surfaces. The fractures demonstrate a fine-grained slag with vesicles present. The smelting slag, which forms 24% of the total, is characterised by the presence of some flowed droplets. It lacks the smooth surfaces and fluidity of the tap slag and probably cooled in the furnace, or was raked out, when the bloom was extracted.

Furnace bottoms are plano-convex accumulations of slag that either froze in the base of the furnace, or in a pit outside the furnace. There are three examples of furnace bottom from the excavations, all of which come from the fill of an unphased pit in the far north-west corner of Excavation Area B, which unfortunately produced no datable finds (context 6188). One example has a small feeder attached, which may indicate that it cooled outside the furnace. The dimensions of the three furnace bases are given in Table 6.24 and show variation in weight and dimensions. The base with the feeder was the smallest of the three.

Five examples of slag have a high iron content, manifested by active iron corrosion and a strong response to a magnet. Three derive from contexts containing a small amount of tap slag (*c.* 80 grams). One of these, the fill of a Late-Roman north-south ditch terminus located at the northern edge of Excavation Area B (context 3727, phase 4), contained *c.* 1.5kg of tap slag.

Two isolated pieces of iron ore were recovered, one from the fill of a Romano-British cremation (3327) and the other from a Romano-British occupation layer (3353) associated with structure {4226}. Neither of these contexts contained metalworking evidence.

Table 6.24 Dimensions of the furnace bases

Context	Weight (g)	Major diameter (mm)	Minor Diameter (mm)	Depth (mm)
6188	4523	280	170	100
6188	1796	170	160	70
6188	3057	160	150	120

Smithing

One of the most crucial pieces of evidence for metal working within the excavations is a single rim sherd of a crucible. Crucibles are used for purifying metal or for melting metal for casting. The crucible fragment was recovered from the fill of a 2nd century AD stone drain (context 3569), located close to and north of structure {4226} in Excavation Area B. This drain appeared to allowed water to drain from the structure into a nearby boundary ditch. Hand-held x-ray fluorescence analysis (HH-XRF) of the crucible sherd identified the presence of zinc (major peak), copper, tin and lead.

The examination of the assemblage of slag and metal-working debris identified four hearth bottoms from four different contexts, all within Excavation Area C. Context 2329 was a clay bonding used on the upper courses of well structure {2330}. Context 2337 was the lowest fill excavated within the same well. Contexts 2236 and 2417 were both fills of the same Late Roman, 'L'-shaped enclosure ditch [2476]. These two features, the well and the enclosure ditch, contained the greatest quantity of smithing debris. Fragments of hearth bottom and smithing slag, tap slag and smelting slag were present in both features. The dimensions of the four hearth bottoms are provided in Table 6.25 and show that they were significantly smaller than the furnace bases.

A total of 5.6kg (Table 6.23) of hearth or furnace lining was recovered from 16 contexts. Five of these contexts also contained smelting slag (tap slag plus smelting slag), four contained smelting and smithing slag, three contained smithing slag, and four contained no macro-slag. The largest deposit of lining was recovered from context 6188, the same context which contained the furnace bottoms and which also contained large quantities of tap slag and smelting slag.

The earliest context to contain smithing slag is the fill of a truncated pit, radiocarbon dated to the Early Iron Age, but the small quantity of smithing slag recovered may have been intrusive. Smithing slag was less abundant than the tap slag and smelting slag, the total weighing

Table 6.25 Dimensions of the hearth bottoms

Context	Weight (g)	Major diameter (mm)	Minor diameter (mm)	Depth (mm)
1052	380	100	90	65
2329	294	90	80	60
2337	340	100	95	55
unstratified	315	90	90	40

just under 6kg. Its distribution was widespread, being recovered from 59 contexts, 14 of which also contained tap and/or smelting slag. Only 19 contexts, however, contained more than 100 grams of smithing slag, and these were predominantly Late Roman in date. Twenty-one contexts contained less than 20 grams of smithing slag and it should be noted that the small pieces of slag in question are very difficult to ascribe to a particular process. They have been classified with the smithing slag, hence the real total quantity of smithing slag may be less than the 6kg listed above in Table 6.23.

Magnetic fraction was extracted from 602 of the environmental samples. Hammerscale was recovered from samples relating to 35 contexts but was present in only seven of the contexts that also contained macro-slags. Of these, the fill of Late Roman boundary ditch [2474] in Area C contained a significant quantity of macro-slags and it is in the vicinity of this area that smithing activity is most likely to have taken place during the Late Roman period. A high proportion of hammerscale in the magnetic fraction was noted in four contexts. However, the size of the magnetic fraction is small in three of these contexts; the fourth is a sample from a posthole which cut into and post-dated the main villa building.

XRF Analysis

A limited programme of HH-XRF analyses was undertaken to assess the overall composition of some representative samples of the different slag types. The main aim was to assess whether there was a compositional difference between the smelting and smithing slags. The methodology is provided in Appendix 6. Iron smelting slags may have elevated levels of manganese oxide, derived from manganese oxide levels in the ore. By contrast, smithing debris generally has very low (~<0.1%) manganese oxide levels. It is sometimes possible, therefore, to distinguish between smelting and smithing slags based on the manganese oxide level. The analysis of the tap slags from Lyde Green demonstrated that the exploited ores were low in manganese oxide, which unfortunately made observance of this sort of distinction impossible. The results of the XRF analysis did not demonstrate a significant difference in the levels of manganese oxide between the various types of slag, although one hearth bottom presented a higher value (Table 9.2-Table 9.5).

The hearth bottoms and the smithing slags are distinguished from the smelting slags by higher alumina and silica levels. This suggests that the slags classified as hearth bottoms and smithing slags have a higher clay content, which may be derived from the furnace/hearth lining. This could suggest that a significant proportion of the material identified as smithing slag is in fact a result of the iron smelting process.

The spectra were processed to provide semi-quantitative but comparable data. The samples analysed comprise four smelting slags, seven tap slags, two hearth bottoms and four pieces of smithing slag. The processed data are summarised in Table 9.6.

The tap slags (Table 9.2) show some variability in composition. The silica content, for example, ranges from 8-36%. The slags are high in P_2O_5 and contain a low level of MnO, indicating the use of a phosphorus rich ore with a very low manganese content. The smelting slags (Table 9.3) show a similar pattern. The hearth bottoms (Table 9.4) are rich in alumina and silica, and hence low in iron oxide; they have a low manganese content, although the example from Context 2329 has the highest MnO level of the assemblage. The smithing slags (Table 9.5) show considerable variation in composition, e.g. the FeO content varies between 26-41%. However, the broad pattern is similar to the hearth bottoms, although the smithing slags are richer in titania (TiO_2).

The Lyde Green villa complex is adjacent to a site where major Anglo-Saxon smelting activity has been recorded (AD 750-950), just 250-300m to the west of the stone villa excavated within Excavation Area B. The industrial enclosure contained six smelting locations, some with multiple furnaces (Pers. comm. Young, Avon Archaeological Unit). An extensive archaeometallurgical study was undertaken by Dr Gerry McDonnell (McDonnell 2013). The mean composition of samples of tap slag and furnace bases are compared here with the mean compositions of the tap slags and smelting slags from the Romano-British site (Table 9.7). The results are very similar. The only significant difference is that the slags from the villa site are higher in P_2O_5 than those from the Anglo-Saxon industrial site. HH-XRF analyses of ore samples from the Anglo-Saxon site indicated that the ores from that site were low in MnO and P_2O_5 and Thomas's research into iron smelting in the Bristol Channel orefield also demonstrated low levels of these oxides in the bedded ores (Thomas 2000: 53-66). The elevated levels of P_2O_5 in the villa site slags are therefore intriguing. They do not appear to have resulted from the deliberate addition of bone, a phosphorus bearing ingredient, as elevated levels of calcium are absent.

Conclusions

The excavations at Emerson Green East have recovered a significant assemblage of ironworking debris. There is enough evidence to demonstrate that smithing was a significant part of everyday life on the farmstead, especially during the Romano-British period. The pairs of iron shears recorded amongst the small finds assemblage, for example, are likely to have been made on site by the resident blacksmith. The majority of slag

identified as smithing slag was deposited in Excavation Area C (5kg). It is probable that the 12kg of smelting slag identified in Excavation Area C is smithing slag. This conclusion is based on the presence of hammerscale in Late Roman ditch fills. This evidence is indicative of a major smithing operation during the late 3rd and early 4th century AD (Area C, phase 6).

The excavation at the villa site of Lyde Green has also revealed substantial evidence for iron smelting. Smelting slag deposition appears to have occurred mainly during the Romano-British period, and was concentrated in Area B. The morphology of the smelting slags i.e. tap slags, viscous smelting slags and furnace bases, is more typical of a native Romano-British technology than the industrial-scale technology of the Roman tradition. Since the total quantity of smelting slag generated cannot be estimated, it is not possible to assess the quantity of iron produced. Whether we are seeing evidence of a small smelting operation associated with the construction of the villa, or an industry that formed part of the early villa economy cannot be gleaned from the quantity of the material. There is some indication that the furnaces may have been located beyond the northern limit of Excavation Area B. The existence of the Anglo-Saxon smelting site only a few hundred metres away to the west may indicate that moving closer to the source of the iron ore may have been a consideration, but a hiatus of over a century appears to have existed between the occupation of the two sites.

The composition of the smelting slags from the villa site indicates a relatively efficient smelting process. The iron oxide content would suggest, however, that there was excess iron oxide in the slag. Stronger reducing conditions would have reduced more of the available iron oxide in the ore. There was a significant quantity of furnace lining (2.6kg) deposited in a single context in association with smelting slags. It is disappointing that the pit feature in question was not more closely datable, and lacked stratigraphic relationships with other Romano-British features within Excavation Area B. Approximately 23kg of smelting slags were deposited in features dating to the mid-2nd to early 3rd century AD.

The Lyde Green ironworking assemblage is important for two reasons. Firstly, it is of significance for the understanding of either the construction process used in the building of villas (cf. Amersham Mantle Green (McDonnell 1984; Yeoman and Stewart 1992) or the economy of the villa (cf. Chesters villa, Fulford and Allen 1992). Secondly, the evidence for Romano-British and Anglo-Saxon iron smelting within a few hundred metres of one another offers great potential for researching the evolution of the exploitation of this resource.

Smithing debris is a common occurrence on villa sites, but there are few clear examples of a smithy workshop attached to a villa, which would be an essential craft for any villa functioning as a farm. The evidence for iron smelting on villa sites is sparse. It is sometimes associated with the construction of the villa complex itself (e.g. Amersham Mantles Green) and may have been undertaken as a component part of the villa's economy (Chesters Villa). Scott's (1988) literature review of the finds associated with Roman settlements identified 36 sites with slag, of which 11 were identified as villa or probable villa sites (Scott 1988: Volume 2). Only one site, Buxted in East Sussex, was identified as an iron smelting site. The excavation of buildings related to a villa complex at Amersham Mantles Green (Buckinghamshire) recovered *c.* 150kg of smelting slag and 20kg of smithing debris (McDonnell 1984; Yeoman and Stewart 1992). It revealed evidence for smelting and smithing in the construction phase of the complex (phase 1) followed by increased smithing during re-building of the villa in phase 3 (McDonnell 1984; 1986: 214; Yeoman and Stewart 1992). Extensive iron smelting activity was excavated at Chesters Villa, Woolaston, Gloucestershire dating to the mid/late 3rd century and late 4th century AD (Fulford and Allen 1992).

Interrogating the online database resource Rural Settlement of Roman Britain (Allen *et al.* 2015 (updated 2018)) using the key words 'villa' and 'iron slag' produces 130 results for Roman Britain. Gloucestershire returns 35 records and Somerset 24 records. In Gloucestershire 16 of the 35 villas had a record of slag and 9 of the 24 villas in Somerset. There are five published villa sites within 14km of Lyde Green, of which four had no record of slag in the database. The fifth, Brislington Villa, produced a single piece of slag in the 2005 investigation (Cullen 2005). In Gloucestershire, three of the villas are recorded as having evidence for iron smelting (Frocester Court, Boughspring Roman Villa and Chesters Villa); three have smithing slag (Barnsley Park, Frocester Court, and Ironmongers Piece).

Kingscote villa is described as having slag, blacksmiths' tools and whetstones. Three Somerset villas have evidence for iron smelting (Gatcombe, Bawdrip and Ilchester Meade), and two were recorded as having smithing slag (Ford Farm and Lufton). The record for two of the Somerset villas implies that the slag was derived from Late Iron Age contexts (Star Roman Villa, Shipham and Crimbleford Knap, Seavington St Mary). In the record of the other sites from both counties the slag has not been characterised. In common with other villa sites the slag has been recorded post-abandonment. For example, at Lufton Villa the slag is dated to the late 4th century AD and was recovered from one of the villa rooms containing a mosaic. This may be the result of the recycling of iron taken from the villa buildings during or after abandonment.

Chapter 7

The development of the landscape from the Roman period to the present day

Richard Newman

with contributions from
Ed McSloy and Megan Stoakley

7.1. Introduction

This chapter will briefly summarise the archaeological evidence for post-Roman activity on the site. It is arranged in a chronological order, beginning with a possible post-villa well of unknown date and ending with the Post-medieval evidence. A brief account of the medieval pottery is given before a general discussion completes the chapter.

The post-villa estate archaeological evidence for the Lyde Green area completes the villa's story, both by examining its landscape legacy and by shedding light on the post-depositional processes that influenced the level of survival noted in the excavations. It is clear that in the later medieval and Post-medieval periods the remains were used as sources of stone and were raided as such. Post-medieval quarrying was highly destructive of the archaeological resource, and drainage culverts also truncated the site in numerous places (Plate 7.1).

7.2. A post-villa period well?

Within Area B a vertical-sided feature [5056], possibly a well, or even a geotechnical pit, was located to the south west of the main villa building. It cut through



Plate 7.1 Culvert {2483}, looking east

the likely 4th century metalled surface that lay outside the villa in that area {4234}. If the feature had been used as a well, the well structure had been robbed out and backfilled. The cut was square shaped and measured 1.52m in diameter. It was excavated to a depth of 1.4m, but not bottomed. Five fills were encountered. No finds or dating evidence were recovered from any of the five fills. Stratigraphically this feature can merely be said to post-date the initial phase of use and occupation of the main villa building and the surfaces that surrounded it to the south-west. How long after the late 3rd century AD it was cut cannot be ascertained.

7.3. Medieval

Despite the proximity of the early medieval smelting site just to the west, no evidence was found that could be reliably interpreted as early medieval (6th to 10th centuries AD) within any of the excavation areas. No finds of this date were recovered, and no radiocarbon determinations obtained. It can only be speculation as to whether there continued to be agricultural land use, possibly within the surviving enclosures of the late Roman period. The area may have become largely open, commonable woodland and pasture.

The earliest evidence for post-Roman, non-agricultural exploitation within the excavation areas comes from Areas A and B and dates to the 11th to 13th centuries (Figure 7.1). No definite medieval material was recovered from Areas, C, D and E, but a trackway in Area D was attributed a medieval date in origin. In Area A the evidence comes from phase 2 features and comprises just four sherds of pottery from the fills of ditches which may be much older in origin (Figure 7.1). A shallow gully [1013] aligned north northwest – south southeast contained two sherds of 11th to 13th century pottery from a fill otherwise devoid of finds. The gully's single fill appears to have resulted from a single depositional event and may be evidence of medieval levelling of an earlier boundary feature. Another gully [1008] aligned east – west contained two sherds of 12th to 13th century pottery in an otherwise finds free fill. Both gullies appeared to respect the alignment of earlier ditches believed to be Romano-British in origin (Figure 2.4).

Most of the evidence for medieval activity came from Area B where it equated with stratigraphic phase 5. A structure {3967} was built in the northwest corner of the Roman bathhouse, sometime after the site had been levelled (Plate 7.2 & Figure 7.1). A stony layer (3758)



Plate 7.2 Medieval post-built structure {3967}, looking west

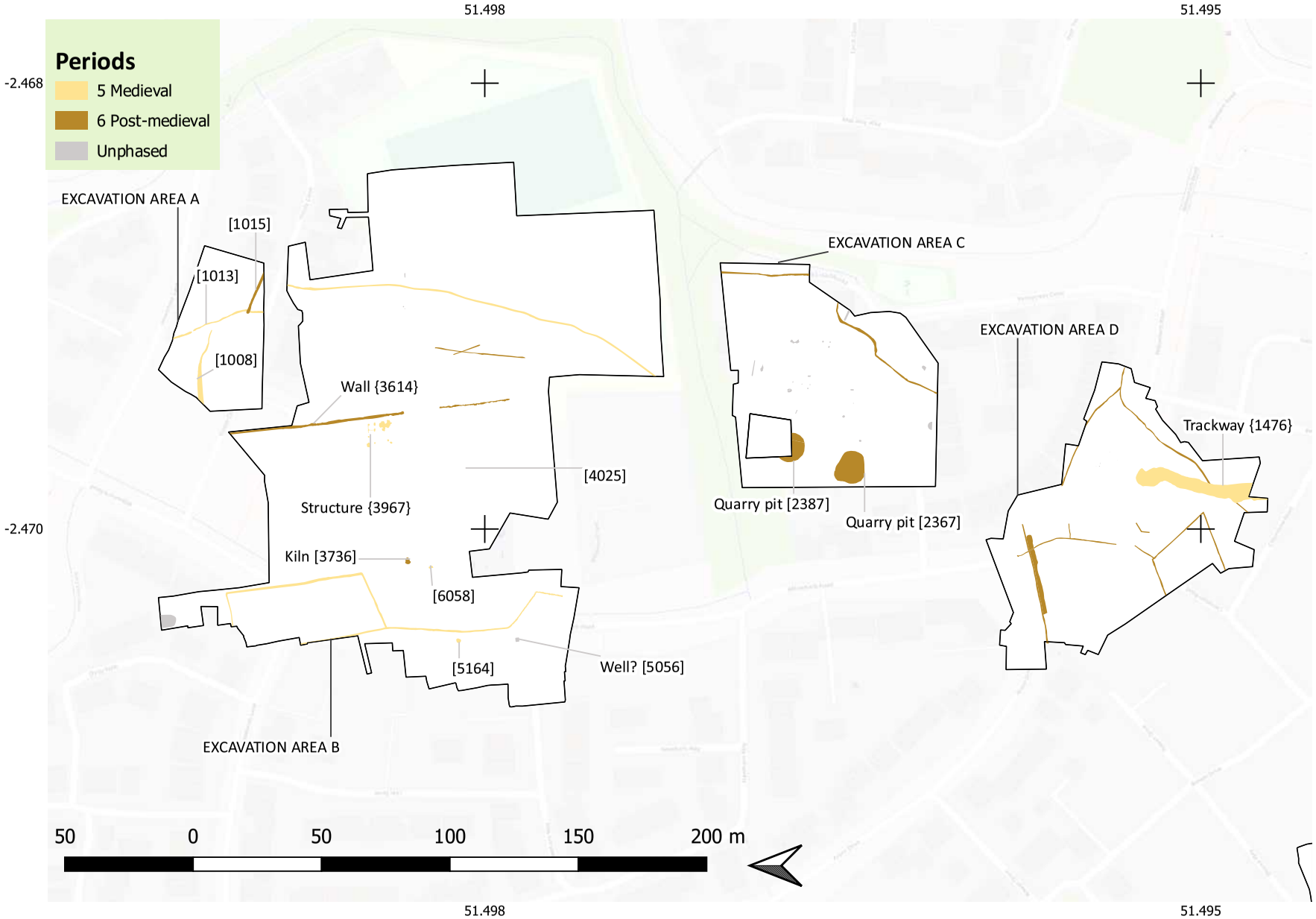


Figure 7.1 Archaeological features of medieval and Post-medieval date recorded within the excavation areas

measuring 9m by 3.5m, appeared to be a levelling layer for structure {3967}. It consisted of loose brown stony silty clay that contained frequent sandstone fragments. That it was a levelling layer, rather than an occupation phase floor surface, is indicated by all the finds being Romano-British, with all 17 sherds of pottery retrieved from within it dating to the 3rd – 4th century AD.

Structure {3967} consisted of seven postholes that were cut through the demolition layers of the Roman bathhouse into the bedrock. The postholes were aligned in two east-west rows with two narrow foundation trenches, presumably for wooden or wattle and daub walling associated with them. The structure measured 8.15m long by 3m wide. The northern row consisted of four post holes and the southern row three. Two narrow foundation cuts joined the two easternmost postholes of the northern and another joined the northern to the southern row seemingly defining a partition wall. The postholes were substantial, between 0.6 and 0.8m in diameter. The evidence suggests a single storey earth fast post-built timber structure with wattle panels for both the external and internal partition walls. The size of the structure and the presence of a partition suggest that the building may have been domestic in function, though no evidence of a hearth was found.

One posthole from structure {3967} contained a fill with pottery sherds, all of them medieval in date. Posthole [3925], in the northwest corner of the structure, contained four sherds of 12th-13th century. The dating evidence may not be that reliable, however, as posthole [3925] cut a pit [3926] which also contained 12th-13th century pottery, so it is likely that the pottery in the posthole is derived from the earlier pit. Nevertheless, the pit is evidence of medieval activity in Area B and the building's construction techniques are not inconsistent with a 12th to 13th century date.

Other features in Area B containing layers with exclusively medieval finds included two other pits [5164] and [6058], the latter of which may have been a small quarry pit as it was cut into the demolition and building deposits of the main villa building. The fill of this pit included eight sherds of medieval pottery. Indeed, stone robbing may have been the main reason for the medieval presence in Area B and this appears to be borne out by the feature with the most prolific assemblage of medieval pottery from the Lyde Green excavations, pit [4025]. This pit contained 36 sherds of 12th-13th century pottery. Pit [4025] was dug within the remains of Romano-British building {4196} and the large fragments of sandstone slab within the pit's fill appear to have been derived from the stone floor of that structure. The medieval pottery from Lyde Green comprises a fairly typical domestic assemblage derived from local sources. The deposition of medieval pottery within the quarry pit post-dates the digging of the quarry and pre-dates the on-site medieval structure, so its derivation and relationship to either the quarrying activity or on-site occupation is uncertain.

In Area D a trackway, {1476}, was identified in the south-eastern corner of the area. It was aligned roughly north-south and may have been heading in the direction of Hallen. Its dimensions were 49m in length by 6.3m wide and with a make-up depth of 0.42m. The base was a hardcore layer of small stones 0.2m thick. Stratigraphically the trackway overlay the Romano-British features, sealing ditches [1626] and [1435], and was cut by several modern land drains and two Post-medieval culverts at its southern end. Clearly datable finds were lacking from its matrix, though iron blade fragments (lifted as SF 317) were recovered from it, giving a broad date range of Romano-British to medieval.

The principal medieval activity noted in the Lyde Green excavations appears to have been stone robbing of the remains of the Romano-British villa complex, with both the main villa building and the bathhouse being targeted. Stone was clearly not being robbed for any on-site medieval building, as the only such dated structure was built in wood. Given its weight, however, stone is unlikely to have been moved very far. The robbed stone may have been used to build a predecessor of the nearby Hallen Farm. A Roger atte Halle is recorded in Mangotsfield in 1327 Lay Subsidy roll (Franklin 1993), but whether such a reference relates to Hallen Farm, the timber building excavated in Area B or some other nearby but unknown site cannot be defined. It is possible that the timber building was a temporary structure erected while stone robbing was undertaken and a more permanent stone structure located elsewhere, perhaps the Chapel of Ease built for the manor house in the early 13th century. The limited stratigraphic evidence indicates, however, that the timber building postdates at least the digging of one of the robbing pits.

7.4. Post-medieval

Post-medieval activity was evidenced in Areas A, B, C and D where it comprised four main components, drainage, quarrying, stone robbing of the Romano-British remains, and, finally, new boundary formation. By the Post-medieval period it can be assumed that the main focus of habitation in the vicinity of the excavated areas was Hallen Farm and all the archaeologically evidenced activities are likely to form aspects of that farm's land management.

Post-medieval activity in Area A comprised ditch [1015] which appears to have been a field boundary

ditch oriented north-west to south east. It measured 16.5m in length by 0.8m to 1m in width and was 0.5m deep. In profile it had a moderately steep U-shape. The uppermost fill contained a clay tobacco pipe fragment, stratigraphically, however, it cut a likely medieval ditch and was itself cut by several land drains of 19th to 20th century date.

In Area B Post-medieval features equated with stratigraphic phase 6 and comprised three culverts, a boundary wall, a kiln, a trackway, and some miscellaneous pits. All these features are likely to have been associated with Hallen Farm. Culverts occurred in Areas B, C and D and were so similar in all areas that they can all be assumed to be contemporary. The culverts measured 0.40m to 0.50m wide by 0.20m to 0.60m deep. They were drystone constructed and comprised roughly hewn sandstone slabs that were laid in two parallel rows of between three to four random courses forming a narrow channel capped with large slabs. The only finds from within them were residual sherds of Romano-British pottery. Stratigraphically the culverts post-dated most other features and structurally resemble land drains elsewhere in the South West and South Wales that can be dated from the 16th to 19th centuries. Their purpose would have been to drain the area immediately around Hallen Farm.

Wall {3614} in the centre of Area B was aligned roughly north-south, running parallel to a modern boundary wall that was situated about 1m to the east. Clearly it was a precursor to the extant boundary at the time of the excavation. It was 68m in length within the excavation limits by 0.8m in width. There was a gap of 14m in its foundation cut before it continued for nearly another 28m. The wall foundations consisted of a light grey sandstone with large lumps of iron slag forming part of the wall fabric. A trackway [5100] was visible only in section. Aligned east-west it measured 2.38m in width and was 0.36m deep. The trackway was made up of two layers with the uppermost surface consolidated with sandstone fragments and containing five sherds of late 17th – 18th pottery.

The most significant Post-medieval feature from Area B was a kiln [3736]/[6024] which was cut into the main villa building (Figure 7.1). The kiln chamber was circular being 2.35m in diameter and with a surviving depth of 0.4m. It had near vertical sides with a flat base consisting of a compact, red burnt clay. No finds were recovered. Overlying the base was a charcoal layer 0.07m thick. Above the charcoal was a compact layer of lime 0.24m deep. On the eastern side of the chamber leading into it was a rectangular flue (2.25m in length by 0.55m wide). It was aligned north northwest-south southeast and had a gradual sloping east side and sharp sloping west side with a flat base. Two pieces of Post-medieval glass were recovered from the fill of the flue. The kiln has the characteristics of the base of a small field lime kiln. The lime that was created would have been used for marling the fields. Limestone was used in the construction of the main buildings of the villa complex and this suggests that the kiln was positioned to take advantage of an on-hand supply of limestone. Consequently, it can be suggested that the greatest impact of stone robbing took place in the Post-medieval period and was specifically a result of agricultural lime production. The kiln is likely to date to the 18th or 19th centuries and to certainly have been out of use and probably demolished before the first edition Ordnance Survey mapping of 1881 (OS Gloucestershire LXXII.8, 1882).

Quarrying was the principal Post-medieval characteristic of Area C. Post-medieval features equated with stratigraphic phase 8 activity and comprised two quarry pits, which lay on the west side of the excavation area (Figure 7.1). Quarry pit [2367] was 12.55m long by 11.47m wide but it was only explored to 0.7m. Quarry pit [2387] was located to the north of quarry pit [2367]. It completely removed most of the western side of Iron Age/Romano-British enclosure [2468]. Most of the pit lay outside the limits of excavation. In addition to the quarry pits Area C also featured two stone culverts.

In Area D Post-medieval activity equated to stratigraphic phase 9, consisting of six stone-built culverts in the central, eastern and southern parts of the area cutting through features from almost all the previous phases. Some of the culverts were badly damaged by modern ploughing. It seems there may also be evidence of stone robbing from structure {1650} as a demolition deposit (1079) within structure {1650} returned a radiocarbon date from alder charcoal of cal. AD 1643-1805. Deposit (1079) was not the securest of contexts, however.

7.5. Small finds

Medieval

SF 158 (Unstratified)

A copper-alloy probable medieval plate from a single loop folding strap clasp. The plate does not have a recess for the pin. The plate has five perforations to hold rivets, the heads of two are located on one face, two on the other and one is missing. This suggests that two were inserted as repairs. The plate is decorated with a border formed of two lines of opposing triangular punches. It is likely that this plate is from a medieval folding strap clasp.

Egan and Pritchard (Egan and Pritchard, 1991, p. 118) suggest that this style of clasp was in use *c*. AD 1270-1450.

Post-medieval to modern

SF 178 (Unstratified)

A lead post-medieval uniface token. The front face depicts a flower as a central pellet, the reverse is flat and undecorated

SF 291 (Unstratified)

A circular lead button. The front face is convex and undecorated. To the reverse is an incomplete projecting loop. The button is 17mm in diameter and weighs 5.61 grams.

The post-medieval to modern assemblage also includes three incomplete copper-alloy strap fittings: SF 159 (Unstratified), SF 160 (Unstratified), and SF 162 (Unstratified). The strap fittings show evidence of machine manufacture. A copper-alloy ring (SF 208) could have been used for a variety of different functions and is likely to be medieval to Post-medieval in date. SF 74 (Unstratified) is a copper-alloy disc 18.5mm in diameter and SF 154 (Unstratified) is a copper-alloy mount.

7.6. Bulk finds

Neither the medieval nor the Post-medieval bulk finds were analysed in detail. Pottery of this date was not described much beyond the attribution of date and fabric type. Data on clay tobacco pipe stems, medieval ceramic building materials, Post-medieval pottery and Post-medieval glass is contained in the site archive report. The medieval pottery assemblage is quantified and characterised in the table below.

Table 7.1 Medieval pottery from Lyde Green

Fabric	Description	Count	Weight (g)	EVEs
BATHA	Bath A type (West Wiltshire) unglazed coarsewares	7	107	0.08
COTS	Cotswold type Oolitic limestone tempered	23	98	0.22
HGC	Ham Green unglazed sandy coarsewares	13	165	0.37
BRGL	Bristol glazed wares	1	16	-
MOTTE	Limestone tempered Motte ditch type	5	40	0.08
QZ	Miscellaneous sandy coarsewares	3	25	-
GLAZ	Unsourced sandy coarsewares	1	41	-
HGB	Ham Green B jugs	3	62	0.17
MINE	Minety type wares	28	362	0.26
Totals		**84**	**916**	**1.18**

Other medieval and Post-medieval finds of note comprise a single silver coin of 13th century date (SF 233) and a likely spindle whorl (SF 181). The coin weighed 1g and was retrieved from an unstratified deposit. It was minted during the reign of Henry III (AD 1207 – 1272) and appears to have been deliberately clipped.

Small find 181, weighing 147g, comprises a plano-convex, circular lead weight or spindle whorl. Similar examples have been recovered from sites in Hampshire (SUR-7A0E27; WILT-3D5C25; WILT-3D3864, PAS on-line 2013) and Wiltshire (WILTAFC765 & WILT-DB4594, Ibid) and the object is likely to be of medieval to Post-medieval date.

7.7. Discussion

There is archaeological evidence for continuity of settlement and enclosure in the Lyde Green area from at least the 1st century AD (and possibly earlier) through to the late 4th century AD. It is possible that the Mangotsfield area was relatively sparsely populated between the later 5th and early 12th centuries. Mangotsfield was by the 11th century situated within the Forest of Kingswood and lay just to the east of the later Kingswood Chase (Moore 1982: 9).

As a medieval forest, Kingswood was not an area of solid woodland without settlement. Its primary purpose was to be a hunting preserve and woodland common is likely to have been quite extensive. It is considered that the origins of this royal hunting preserve lay at least in the mid-10th century when a royal estate was established in neighbouring Pucklechurch (Moore 1982; Young and Young 2013). The area may have been chosen as a hunting preserve because of its relatively undeveloped state. This situation may have come about because of the area's liminal status throughout much of the early medieval period. In the mid-6th century, it was within the frontier zone between areas of British and Anglo-Saxon dominance and in the 7th to 9th centuries it was close to the border of the West Saxon kingdom with the Hwicce and Mercia.

By the later 9th to early 10th century the Lyde Green area was being used for a major Anglo-Saxon iron industry, with the known furnace site located only 250-300m west of the former villa location. There exists the possibility that the settlement focus shifted away from the site of the current excavations

in order to be closer to the source of the exploited ore. If so, evidence of this Early medieval exploitation has not yet been found. Iron smelting continued to be an important industry within the district into the late 11th century, as Domesday Book records that six men of Pucklechurch manor rendered 100 ingots of iron to their then manorial lords, Glastonbury Abbey (Martin 2002: 454). This is considered an unusually large iron render (Young and Young 2013). As in later periods the location of an iron working furnace has as much to do with the availability of wood for charcoal as it did with the proximity of iron ore. The investigators of the furnace site estimated that the furnaces would have annually consumed about 400 tonnes of wood to become charcoal fuel. The charcoal analysed from the furnaces indicated that whilst some coppice hazel may have been consumed, most of the wood being turned into charcoal was mature oak (Young and Young 2013). This suggests that the Lyde Green area was well wooded in the later 9th century. The supply may have been sufficient for the purposes of charcoal fuel, meaning that managed coppice may not have formed an important feature in the local early medieval landscape. If most of the wood was not coming from managed coppice it is likely that woodland would have been reduced during the lifetime of the furnaces. In areas of common grazing cleared woodland would have been cropped preventing woodland regeneration. The open areas created would have been target spaces for settlement expansion during a time of local population growth.

It has been noted that the rural settlement pattern of Mangotsfield parish is locally distinctive and certainly is suggestive of a former cleared woodland area assarted in the 12th to 13th centuries (La Trobe Bateman 1997: 4 & 11). Three 'end' settlements survive in the parish as satellites of Mangotsfield, Downend, Hallend and Moorend and, and it has been suggested that these settlements may define the furthest extent of medieval assarting in Mangotsfield (La Trobe Bateman 1997: 11). Medieval assarting is also evidenced by the frequent green names in the parish such as Emersons Green and Lyde Green and it is likely that this process provides the context for the resettlement of the villa site probably in the 12th century.

It is unclear as to the duration of the medieval building on the former villa site, but it can be assumed that occupation moved from there to the site of the former Hallen Farm. It was from there that the final phase of non-agricultural exploitation of the villa site took place, with the erection of a lime kiln within the former main villa complex. The kiln was clearly located to exploit the villa complex as a source of available limestone.

Chapter 8

Lyde Green and the Romano-British villas of South Gloucestershire

Richard Newman

8.1. What is a villa?

The purpose of the Lyde Green post-excavation programme has been to set the Romano-British villa discovered there within a spatial, chronological and social context. Over and above this, it is hoped that the results can help to contextualise the other Romano-British villa remains known more broadly, across the South Gloucestershire region. To do this it is first necessary to define what is meant by referring to archaeological remains as a Romano-British villa. Eleanor Scott usefully did this in her doctoral dissertation and a simplified summary is included on her website.[1] Firstly, the contemporary Roman definition of a villa and the way in which the term has historically been used by archaeologists are different (Roymans and Derks 2011: 2). The use of a term should not be abandoned because of this, and the recent habit of eschewing the use of the term 'villa' to describe a class of building, or 'villa estate' to describe a type of rural settlement, is not helpful.

The Roman legal meaning of the term villa, as codified in the 6th century AD, simply meant a rural building (examples can be found in the *Digest of Justinian* 33.7). In Latin the term villa meant a farm, which led R.G. Collingwood to assert that 'any house of the Roman period may be called a villa, provided that it was the dwelling of people, somewhat Romanised in manners, who farmed a plot of land' (Collingwood 1930: 113). J.T. Smith has also favoured a modified version of this definition in his European-wide study of villa architecture (2002). Unfortunately, this is not useful as an archaeological definition, as it is too wide and all encompassing. It is better to separate the archaeological definition of villa from any historical definition and to base the archaeological definition on specified archaeological evidence. By this means the term villa becomes an archaeological classification and, for the purposes of archaeological analysis, nothing else.

The recent publication of the results of the 'New Visions of the Roman Countryside' project both implicitly accepts that archaeologists perceive a difference between farmsteads and villas, and explicitly acknowledges that defining villas is problematic (Smith *et al.* 2016: 17). Martin Millett discussed this issue in 1990 and highlighted some of the physical indicators that might be taken to attribute a villa classification to a structure: solid floors, use of stone in building, mosaics, hypocausts and baths (1990: 91). More recently Allen and Smith have compiled a similar list, adding the use of painted plaster and a tiled roof (Smith *et al.* 2016: 17). All these are structural elements of buildings, but they are also items that, if preserved, an archaeologist can record. Other relevant material could be the presence of window glass and copious coin finds. Possession of any one of the above attributes should not be considered definitive evidence that a site should be classified as a villa, but neither are all aspects required to justify such a classification. Clearly, as with all classifications, the boundaries for some sites will be blurred, but at least a baseline is established against which to justify classification.

The classification generally adopted by archaeologists to define villas, and which has been articulated here, allows for the inclusion of a wide range of buildings, both in layout and size. Nevertheless, they share characteristics that mark them out as elite buildings and distinct from the mass of other domestic dwellings in Roman Britain. Consideration must be given to this variety, to the changing motivations for adoption of villa-type living, and to changing levels of adoption across the social hierarchy. It is the distinctiveness of villas as elite structures that leads to villas throughout empire being regarded as 'machines for competition' that enabled owners to pursue social advancement (Bowes 2010: 95-97).

This singular interpretation of villas as nothing other than mechanisms for display and social competition dominated considerations of villas for many years (Bowes 2010; Millett 1990; Smith 2002), but it lacks balance and in recent years has been challenged. Villas are now seen, in most instances in Britain, as both likely centres of largely agricultural production and as means of display (Taylor 2011: 179).

In conclusion, the archaeological definition adopted here for the classification of a Romano-British villa is a building that has a suite of evidence that includes multi-celled building layout, use of masonry, painted wall plaster, concrete floors, mosaics, stone or clay roofing tiles, incorporated bath suites and/or detached

[1] https://eleanorscottarchaeology.com/els-archaeology-blog/2018/2/12/what-is-a-roman-villa

bathhouses, hypocausts, window glass, and frequent coin finds. On this basis the tripartite corridor building at Lyde Green (structure {6197}) is a villa, whereas the earlier three-celled structure {1650} is not. Other authors such as J.T. Smith, however, would class structure {1650} as a villa (Smith 2002: 103). The Lyde Green main villa building appears to have lacked mosaic floors and heated rooms. In appearance it seems to have been a likely two-storied building, perhaps timber framed on dwarf walls of imported limestone, with a stone tiled roof. The main villa building was set in an enclosure that contained other buildings, the most visually impressive of which was a bathhouse.

8.2. The villa as a farmstead and the villa estate

Villas are frequently considered as signifiers of social position, and thus, it has been thought, did not necessarily require an attached agrarian estate or engagement with agriculture (Bowes 2010). In the case of the Lyde Green villa, however, grain drying was being undertaken on the site. Such activities, however, may be more indicative of a villa establishment's patterns of consumption rather than being an indicator of attached estate-based production. Fewer farming tools than one might expect are present within the finds assemblage, although the multiple pairs of shears in close proximity to the water management structure may indicate fleece processing. The apparent continuation of activities from the pre-villa periods suggests uninterrupted land management and there is nothing to indicate that pre-villa management was anything other than primarily agricultural. Other than the elite house and bathhouse, the remaining buildings within the villa compound can be argued to have had an agricultural function and the villa's situation, within a seemingly actively farmed landscape, suggests that at Lyde Green the villa became the new centre of a farmed estate.

Most excavations of villa sites in Britain before the late 20th century concentrated on the main villa building, seldom even exploring the compound/complex within which the main villa building sat and certainly not investigating the wider landscape setting. More recently opportunities have been offered to do both, as at Lyde Green and Stoke Gifford in South Gloucestershire (Brett and Brindle 2018), Barton Court, Oxfordshire (Miles 1986) or Cottingham, east Yorkshire (Rose and Williams 2020). Most notable in the Cotswold/Severn region have been the extensively published excavations of Frocester (Price 2000b; 2010). Inevitably, with the opportunity for wider landscape-scale investigations, questions arise concerning both the compound or steading associated with the main villa building and the landed estate associated with the villa complex. Other Romano-British sites with settlement enclosures set within field systems have been interpreted as estate centres on far less evidence than that recovered for Lyde Green, as for example the 1st to 2nd century AD site at Whirlow, Sheffield (Waddington 2012). Defining the villa estate at Lyde Green, either geographically or as a chronological development, is fraught with difficulty, however. There is little evidence for the size of the estate and no evidence for the estate's boundaries. It would be naive and almost certainly erroneous to associate all archaeological features found within a given area through the medium of modern archaeological happenstance.

There is no overriding reason to associate contemporary evidence, physically separated by hundreds of metres, with the activities of the same communities or kinship groups. Neither should physically close but chronologically distinct activities necessarily be considered to have a sequential relationship. Nevertheless, at Lyde Green sufficient circumstantial evidence exists to suggest that many of the archaeological remains recovered are likely to have an estate-based relationship, at least from the Late Iron Age through to the late 4th to early 5th centuries AD. The villa estate for Lyde Green would doubtless have been large enough to encompass all the excavation areas and much more. The individual site areas suggest shifting foci of activities across time within a coherent, though evolving, enclosure system. The settlement evidence from the 1st to 4th centuries AD suggests that as activity in one area came to an end, so it began in another distinct, but nearby, area. The finds evidence, especially the pottery, indicates unbroken occupation within the area from the Late Iron Age through to at least the late 4th century AD. A reasonable conclusion is that all this activity took place within a single evolving estate. This evolution, however, may include land sale, inheritance, or exchange. So, whilst the concept of the development over time of a coherent estate can be advanced, this does not imply a continuity of the estate occupation, whether familial or kinship based.

8.3. Summary of the excavated evidence from Lyde Green

The low ridge that formed the focus of the 3rd to 4th century AD villa development at Lyde Green appears to have been continuously occupied from the Late Iron Age onwards (Figure 8.1). Only sporadic evidence of earlier exploitation both in the Bronze Age and Early Iron Age periods was recorded. Whilst no settlement could be identified from before the Romano-British period, it is clear from the pottery evidence that there is likely to have been Late Iron Age domestic activity within the vicinity of Areas C and D.

In the 1st century AD a D-shaped enclosure was developed at the southern end of the ridge within Area D (Figure 8.1). This was enlarged and made more robust in the later 1st century and it is speculated that this may

have been a response to the 20 years of conflict between the Romans and the Silures, who occupied the opposite side of the Severn Estuary to Lyde Green. It is not certain that the two successive enclosures surrounded a habitation site, but the concentration of 1st century artefacts within these enclosures suggests that they may have (especially so for the later enclosure).

The field system noted in areas B, C, D and E, seems also to have originated in the Late Iron Age. Aside from the large rectangular enclosure in Area C, these initial ditches were narrow and for drainage, frequently following the contours down slope. These drainage ditches in some cases were defining field boundaries and in others, trackways. They contained most of the earliest phase Roman-British pottery that was found outside of Area D. Rather than being contemporary with their origins, however, this material appears to have accumulated at the end of the ditches' functional life. In the 1st century AD, the field system seems to have been replanned, with larger, more regular rectilinear ditches forming enclosures in Areas B and C.

In the 2nd century it seems that the D-shaped enclosure ceased to be the focus of activity and a three-celled, possibly two-storey and probably thatched, half-timbered house was built to the east of the enclosure, off the top of the ridge. This building appears to have spanned a period from the early 2nd century through to the later 3rd century. It was contemporary with a grain drying kiln and a single-celled, large rectangular (probably half-timbered) building within Area B. It is assumed that these were all part of the same estate.

At the same time as the buildings of the 2nd to 3rd century farmstead were in existence in areas B and D, there was a considerable smithing enterprise being undertaken in Area C. This comprised a hearth, an enclosed working area, and a well. It is possible that smelting was undertaken at the same time to the north of Area B, but the evidence was comprised primarily of undatable slags, deposited in likely tertiary contexts. Any smelting operation associated with the estate may have been undertaken at a commercial, rather than domestic, level, as smelting was an expensive enterprise (Allen *et al.* 2017: 185). It is speculated that profits from ironworking may have contributed to the accumulation of sufficient wealth to allow investment in villa buildings. Ironworking was being undertaken on site by the 1st century AD, when a bowl furnace was operational within Area B. At least intermittently, the Lyde Green vicinity continued to be important for ironworking until at least the 11th century AD.

The basis of any farming economy at Lyde Green, as at other Romano-British sites like Frocester Court, is difficult to establish (Hurst 2002: 631). The villa and the presumed preceding farmstead were set within a subdivided landscape of enclosed fields. Grain being processed at the site may have been a product of the surrounding fields, or imported to the site for consumption, and the same applies to the limited animal bone evidence. Perhaps building {3583}, which clearly utilised water sluiced through the structure, may have been used for fleece washing. This structure, and the nearby recovery of five sets of shear blades, may be indicative of the importance of wool production. A mixed farming economy based on cereal and wool production can thus be speculated. It may be that the Late Iron Age and Romano-British local farming economy of South Gloucestershire was commercially based on production surpluses of these two commodities, as it was in later periods.

The change from a multifunctional farm estate into a minor villa estate came at the end of the 3rd century AD. A new domestic building of a tripartite corridor design was built on top of the ridge. Why the location of the domestic accommodation was moved from below to atop the ridge is perhaps related to the very nature of a villa as opposed to an ordinary farmstead. For a farmstead, shelter may have been an overriding locational factor, but for a villa social display, and hence prominence and visibility in the landscape, was likely to be pre-eminent in deciding house location. The increase in status exhibited by the main building in comparison to the previous farmstead is indicated by a suite of factors. The new building had many more rooms, it had a stone-tiled, rather than thatched, roof, and was serviced by a nearby bathhouse. The bathhouse had at least a plunge pool and a tepidarium. Other ancillary buildings included a possible fleece washing structure, a two-cell possible agricultural building and a grain drier. The buildings were contained within a gated compound.

A notable feature of the Lyde Green excavations was the number of wells found. There were five definite wells and one further possible well recorded. In most cases the wells appeared to have distinct functions, linked to nearby buildings or activity areas. In Area C there was a well which pre-dated the occupation of the villa and appears to have supplied water to an area of smithing activity. There was a contemporary well in Area B that may have been used in association with cereal processing. That well continued in use during the villa occupation. Within Area B there were four other wells. One supplied the bathhouse, another a possible farm building contemporary with the villa occupation. Another putative well may have supplied the villa. The fourth well stratigraphically post-dated the abandonment of the villa but is otherwise undated. Unfortunately, because of health and safety constraints, only one of the wells was fully excavated. The

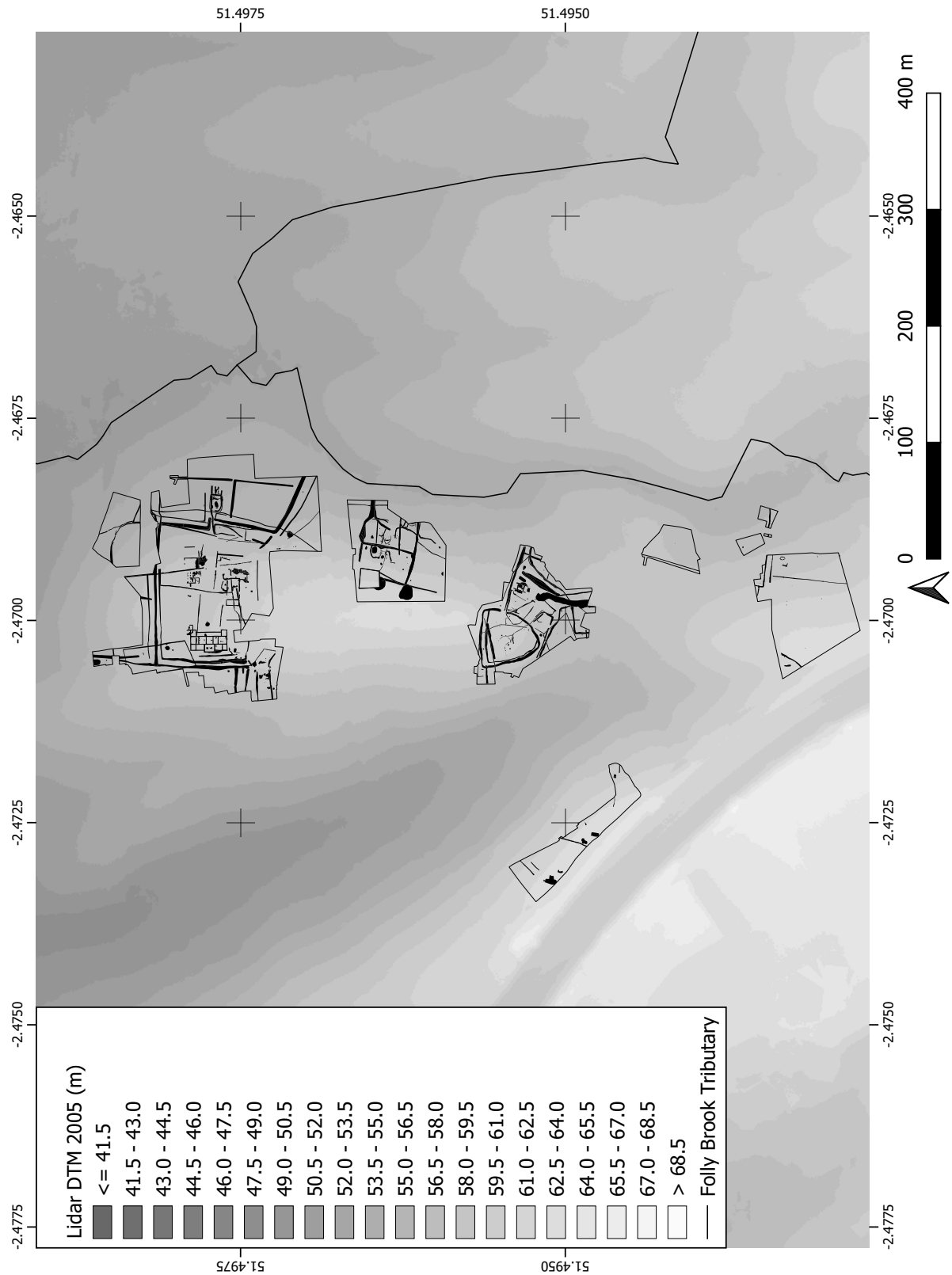


Figure 8.1 The excavation areas, shown in relation to a Digital Terrain Model (LiDAR data from the Environment Agency, 2005)

excavation of wells is often restricted on archaeological sites excavated as mitigation for development. The limited excavation of most of the wells meant that any possibility for structured deposition and special deposits within them could not be identified.

Wells have a functional life cycle summarised as construction, use, abandonment and post abandonment (van Haasteren and Groot 2013: 27). Iron Age and Roman period wells can have deliberate deposits for each of these phases, which may be an offering to celebrate commencement or conclusion of a phase, including post-abandonment commemoration (van Haasteren and Groot 2013: 43). Near Lyde Green, Brislington villa excavated at the end of the 19th century had a well with clear evidence of special deposits having been placed within it, including human remains (Barker 1900: 18; Scott 1993: 119). Similar deposits to those from Brislington, without the human remains, were found at another villa close to Lyde Green, at Truckle Hill, North Wraxall (Scott 1993: 125). Both the Brislington and North Wraxall wells had evidence for demolition material being placed within them. The same was noted at Lyde Green in the well dug before the construction of the villa in Area B. It continued in use throughout the period of villa occupation and was infilled as a deliberate act following the demolition of the villa. It is unlikely that this well was used as a convenient void in which to deposit demolition material, rather this appears to have been a deliberate slighting of the well. Not only was it rendered unusable but its filling with demolition rubble equated with the termination of the villa. The well and the villa linked in life were joined in death.

In general, the finds assemblage from the period of villa occupation does not indicate an especially wealthy household. Aspects of the finds assemblage, such as a general lack of ceramic finewares, is, however, a feature common to Romano-British rural sites. Most coins found on site were from the early 4th century, followed in frequency by those of the late 3rd century. The coins reflect a pattern of increased coin loss that is noted across other Romano-British sites during the Late Roman period. The finds assemblage appears to indicate a lessening of activity in the second half of the 4th century. It is not possible to put a precise date on when the site was abandoned. The last datable evidence takes it to the end of the 4th century AD and the site may well have continued to be occupied into the early 5th century.

When the villa ceased to operate it may have been deliberately and systematically demolished. The excavated remains showed that in places walls had been robbed out at an unknown time. The ancillary buildings survived to foundation level, and in some cases had a few above-ground courses remaining in situ, with limited overlying or abutting rubble and demolition deposits. This might suggest deliberate demolition and removal of materials, rather than a prolonged slow collapse of the structures. The well, recorded adjacent to the bathhouse, was filled with material seemingly derived from the bathhouse, indicating that the bathhouse was demolished and the well slighted as one contemporary activity. No post-Roman cultural material was associated with this event. By the early 13th century, the bathhouse area of the site was sufficiently flat to allow the erection of a timber building on its ruins. It may be that the levelling of the bathhouse took place immediately prior to the building's erection but the medieval stone extraction that preceded the building of the 13th century structure appears to have been in the form of quarry pits. The suggestion is, therefore, that at least the bathhouse and its adjacent well were deliberately demolished and levelled. As for the remainder of the villa complex it seems that at least some surface indications may have survived to encourage the establishment of a post-medieval limekiln supplied by imported limestone robbed from the surrounding villa building.

On the artefactual and other dating evidence it seems that if systematic demolition was undertaken it did not occur before the late 4th century/early 5th century AD. It is suggested that this was undertaken by the estate's owners. Why this may have occurred can only be surmised but a change in estate organisation precipitated by the societal and economic dislocations of the earlier 5th century seems the most likely culprit (Esmonde Cleary 2016).

Evidence specifically related to the individuals who owned, lived or worked in the Romano-British farm and later villa estate comes from burials. At Lyde Green there are ten cremations containing human bone, mostly urned, and three cist burials spatially associated with the Romano-British farm and later villa estate. All these burials appear to date from the 2nd through to the 4th century AD, though the cist burials are largely undated. Neither urned cremations nor cist-buried inhumations conform with the most common form of contemporary burial, which during these centuries was non-cist inhumations (Smith *et al.* 2018: 205-280).

The inhumations and cremations are spatially distinguished with the inhumations situated close to, but not within, occupation areas. The Lyde Green cremations occur mainly in two clusters and were perhaps distributed in relation to certain contemporary structures. The difference in distribution between the inhumations and cremations indicates, if they are broadly contemporary, that there was some patterning involved in their distribution perhaps associated with

some form of cultural distinctiveness between the inhumed and the cremated.

The cremations in Area B are chronologically interesting. Though there were geographical variations (Cool 2011: 297), it is generally considered that inhumation had replaced cremation as the main burial rite across England and Wales by the later Roman period (Smith *et al.* 2018: 209). This view is borne out by the statistics for burial rite compiled for the 'New visions of the countryside of Roman Britain' project. In the Central Belt project region, which includes South Gloucestershire, inhumations are 21.6 times more common than cremations in the later Roman period. Even by the mid-Roman period, equivalent to the mid-2nd to late 3rd century phases at Lyde Green, cremations only equate to 24.6% of all contemporary burials known from the Central Belt (Smith *et al.* 2018: 211). Consequently, the domination of cremation over inhumation at Lyde Green seems aberrant. It has been noted, however, that it is the Bristol, Avon Valleys and Ridges character area that is the only part of the Central Belt to register more than 20% of its Romano-British burials as cremations (Smith *et al.* 2018: 216), so there was perhaps a persistent relative local bias towards cremation.

The preference for cremation at Lyde Green may be class related, with the workforce continuing with a tradition of cremation while the landowning family perhaps had gone over to cist burial before the end of the 3rd century. This is pure speculation, however. While the cremation urns were coarseware pots, indicators of wealth in mortuary archaeology do not necessarily correlate with a deceased individual's status when alive (Crowley 2011: 195). As has been noted, cremation did not represent a lesser investment in the disposal of the dead than well-constructed graves for inhumations (McKinley 2006), and at least one of the cremated individuals at Lyde Green appears to have had a rich diet. It is notable that, other than at Lyde Green, only one cremation has been found on villa sites within the South Gloucestershire and Bristol area. Late cremations are more commonly associated with lower status settlements (Smith *et al.* 2018: 216). If the inhumations and cremations are contemporary their distinctive distributions and burial rite may be a consequence of distinctive religious affiliation rather than class or kinship distinction. The likelihood of social separation of burial within villa complexes was highlighted in the review of villa associated burials in the 'New Visions of the Roman Countryside' project publication on death in the countryside (Smith *et al.* 2018: 248), though such possible examples as Lyde Green are very rare in Britain.

The three cist tombs at Lyde Green were situated one each in Areas B, C and D. The tomb in Area D is considered to predate the late 3rd century and the occupation of the villa. The other cist burials are thought to date to the period of the villa's occupation, from the late 3rd century through possibly to the early 5th century. None of the cist burials contained either bodies or grave goods but from two evidence of a former inhumation were indicated by the remnants of hobnailed footwear. Two of the cist burials are aligned north south and one east-west. Whether burial alignment in this period has any significance for religious affiliation is debateable. Romano-British cists in general appear to primarily be Late Roman in date and there seems to be something of a preference for this type of burial within the Severn-Cotswold sub-region (Smith *et al.* 2018: 258-259). The cost and effort of creating a well-made cist may also be indicative of such buried individuals having a higher status, or at least being from wealthier families. The absence of bodies from the cists does not mean that the cists were empty and the evidence for footwear in two of the cists indicates that bodies had been present. Their absence at the time of excavation may be a result of the total decay of the bodies due to the soil conditions.

A similarly constructed and contemporary north-south aligned cist burial was found during archaeological investigations nearby at Rodway Hill in Mangotsfield (Young 1999: 4). It too did not contain evidence of a body, which was attributed by the excavators to the acidic soil conditions. The nearby villa at Stoke Gifford also contained an empty possible cist (Brett and Brindle 2018: 31). Here some inhumations in non-cist graves survived, so soil conditions seem unlikely to provide the explanation for the absence of a body. That empty cists are a general feature of the locality requires further exploration, but rather than automatically attributing the absence to soil conditions, past societal actions should be considered. One hypothesis for Lyde Green is that cist burials may represent the estate owning family with the ancestral remains being disinterred and removed when the family moved on, but this interpretation is weakened by the occurrence of empty cists elsewhere in the locality. A further consideration is that the cists were chronologically as well as spatially distinct from the cremations. Burials containing evidence of hobnailed footwear, as with two cists from Lyde Green, are generally considered to be Romano-British, but an inhumation containing hobnails from Shepton Mallet, Somerset, and initially believed like the remainder of the cemetery to be Romano-British, returned a radiocarbon date of AD 430-680 (Leach and Evans 2001: 45). Elsewhere in the province of Britannia Prima there is evidence for the use of cemeteries from the late Romano-British period into the Early medieval period as at Atlantic Trading Estate and possibly Llandough in south Wales (Evans 2003: 11). Where hobnails were present at Llandough they were occasionally associated with Romano-British

artefacts but where radiocarbon dates were obtained, they proved to be Early medieval (Holbrook and Thomas 2005: 33). A date as late as the 8th to 11th century AD was produced from an inhumation with hobnails from the villa site at Frocester Court, Gloucestershire (Price 2010). Whilst an Early medieval date cannot be ruled out for the cist burials at Lyde Green it seems unlikely that they would greatly post-date the early 5th century and the cists there appear to be within a Romano-British/ Late Antique cultural context related to the occupation of the villa and perhaps its preceding farmstead.

In summarising the evidence from Lyde Green in relation to the 3rd to 4th century villa complex it is important to review the evidence in relation to research questions:

- What was the villa's spatial and chronological context?
- What factors led to site selection?
- What was the relationship of the villa complex to pre-existing patterns of agriculture and settlement?
- What was the economic basis for the villa's foundation?
- What was the villa's role as a producer and consumer?
- What was the villa's place in the local settlement hierarchy?

The 3rd-4th century villa at Lyde Green was built on top of a ridge overlooking and descending into a stream valley to the east. It is suggested that the villa was positioned on top of the ridge to give it prominence in the local landscape, visually signifying the owners' place in local society. The site at Lyde Green would have been visible because of its relative elevation to lower lying sites to the west, where other areas of Romano-British activity have been noted. To the east, the direction in which the main villa building and the villa compound faced, prominence would have been less evident from elevation, but the site would have been overlooked by a ridge traversed by the Roman road heading north. The site may also have been visible from Rodway Hill to its south-west. The quest for elevation in locating sites to build villas seems to be a recurrent theme. It is the case locally at Brislington (Barker 1900: 291) and spectacularly so further north in the Cotswolds at Great Witcomb (Clifford 1954: 8; Holbrook 2003: 179). In the latter case a stream at the base of the slope offered one water source, but springs around the site provided flowing water nearby and a pented water table offered access to clean drinking water via wells. Whilst many of the villas in South Gloucestershire and neighbouring districts occupied elevated positions, most villas are found at a height of between 60 and 120m. This altitude niche seems to avoid low lying land at risk of flooding and areas where winters might be harsher (Figure 8.2). A few villas, Colerne, Marshfield and Badminton, located on the Cotswold dip slope, sat above 120m.

The site of the villa complex at Lyde Green was within an already well-developed landscape and seemingly within an existing estate, so while the villa site may have been selected for its natural advantages, its selection could not have been solely determined by such factors. It was constrained by existing landownership and possibly by existing land-use. The villa complex seems to have been fitted into a pre-existing compound where processing activities had been undertaken. It was not established adjacent to the farmstead that was its assumed predecessor, probably for reasons of display and prominence as indicated above. Perhaps also the establishment of the villa complex represents a consolidation of functions, bringing all the estates activities together in one place. Prior to this phase activities appear to have been quite widely dispersed across areas B, C and D. The establishment of the villa may then not simply have been a display of status but also represented a change in estate management.

The villa seems to have been a developmental stage in a farmed landscape's evolution. During the Iron Age the area was subdivided and farmed. The earliest possible evidence for settlement comes from Late Iron Age and Early Romano-British enclosures in Area D at the southern end of the ridge upon which the villa complex was later built. The initial enclosure was refurbished in the later 1st century AD when it possessed seemingly defensible characteristics and was probably a native farmstead of at least local significance. The enclosure seems to have been associated with the ironworking activity undertaken further north along the ridge. In the 2nd century AD this settlement was replaced by a nearby farmstead comprising a rectangular, multi-celled building. This building was probably the focus of a farm the working area of which lay to the north in Area B. This farm had a diversified economy producing grain, probably rearing stock and engaging in smithing activities and probably also iron smelting. The villa seems to be the successor to the farmstead, which went out of use at the same time as the villa came into being. Thus, the villa seems to be part of a continuum of one settlement replacing another within the possible context of the same estate.

The date of the villa complex, coming into existence in the late 3rd century and continuing through the 4th century and possibly into the early 5th century when it was abandoned, is typical of most villas in South Gloucestershire and its immediate environs (in cases where enough evidence has been obtained to attribute a date range). In examining the evidence from a Romano-British cemetery near the villa at

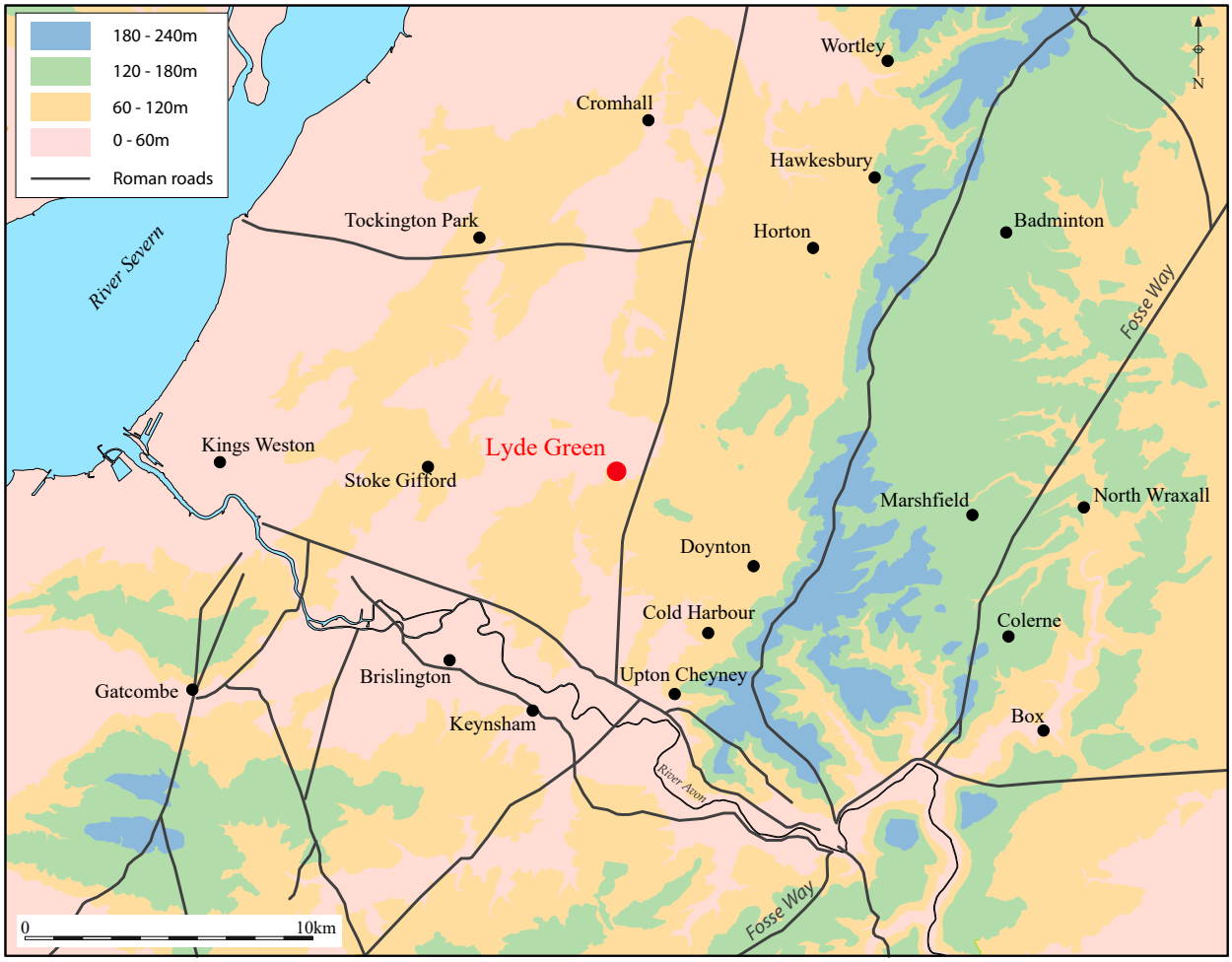


Figure 8.2 Map showing the altitude of villa sites within the region

Tockington, a few kilometres north of the Lyde Green site, it was considered that the cemetery predated the villa because the villa, like all the others in the vicinity, was likely to date to the late 3rd to 4th centuries (Masser and McGill 2004: 107). This assumption, while acknowledging that villas were established in already utilised landscapes, makes the villa and cemetery not only chronologically distinct but suggests that any association, both at Tockington Park and elsewhere, was based on the 'physical advantages of the location' (Masser and McGill 2004: 107). The evidence of Lyde Green, however, suggests that rather than a mere geographical coincidence, such physical associations between 3rd to 4th century villas and earlier Romano-British remains and even Late Iron Age activity, may relate to a continuum of development within a single native British estate.

In the near vicinity of Lyde Green, villas of a variety of sizes and complexity have been shown to originate in the 3rd to 4th century, including examples at Wortley, Kings Weston, Horton, Badminton, Doynton, Stoke Gifford, Brislington, Gatcombe, Keynsham and Box. Branigan (1976) contested, based on the evidence then available to him, that all villas in the vicinity dated to this period, a view more recently restated by Masser and McGill (2004). Further investigations of local villa sites have shown this not to be the case. Even so, it is only in a minority of cases, at Hawkesbury and possibly Truckle Hill, North Wraxall, that villas of apparent earlier origin have been recorded (Osgood 2002; Wessex Archaeology 2008). Consequently, while an individual explanation may be inferred for the timing of the origins of the villa complex at Lyde Green, there appears to be a wider societal development in the late 3rd century which facilitated villa development at that time. Such aspects are considered below in the review of villas in South Gloucestershire.

The ironworking enterprise at Lyde Green, at least in the 2nd and 3rd centuries, appears to have been of a scale that is indicative of more than production for the use of the estate. It is well known that the incorporation of parts of Britain into the Roman Empire provided a stimulus to iron production, especially through the requirements of the army (Sim and Ridge 2002), though in the context of 3rd-century south Gloucestershire the market is likely to have been civilian rather than military.

Smithing products, such as nails, may have been one of the commercial outputs of the estate, but equally such products could have been manufactured for estate use only. It is possible that the estate was also producing iron bars for use in smithies elsewhere. Iron manufacturing was common during the Romano-British period in the north Bristol coalfield (Holbrook 2006: 112-114). Other estate outputs may have been processed grain, both before and after the development of the villa complex.

Whether as a reflection of the estate's agrarian economy, or more realistically as an indicator of the villa occupiers' consumption practices, understanding the significance and context of the zooarchaeological record from Lyde Green was hampered by a lack of animal bone data. The range of animals noted was similar to that noted from other local villas and non-villa settlements but there was insufficient data to note changes over time, such as an Iron Age preference for sheep being replaced by a Romano-British preference for cattle. Evidence of possible crops was more forthcoming. Spelt wheat was likely being produced at Lyde Green probably by at least the 3rd century BC. Spelt continued to constitute the bulk of the cereal remains throughout the Roman period. A significant presence of oats in the 1st century AD may be indicative of animal fodder, but later the occasional presence of rye and barley was so insignificant that its occurrence may have been only as contaminating weeds. The large quantities of glumes are evidence that the spelt was being processed on site, clearly using the facilities provided by the grain dryers prior to threshing. The evidence of the spelt glume remains, and the presence of grain dryers together supports the contention that villa estates were centres of grain processing (Allen *et al.* 2017: 185). This need not be taken definitively as evidence of local agricultural production, however, as it is possible the grain was imported as spikelets (Cool 2006: 70). Whether a product of the local estate or as an imported item for consumption, spelt dominates the cereal assemblage as it does for Late Iron Age and Romano-British assemblages throughout southern England (Pelling 2005: 53). There was no evidence at Lyde Green of the increasing use of free threshing cereals in the Late Roman period, which may have corresponded with a decrease in spelt (Allen *et al.* 2017: 16).

Many of the products used in the buildings of the farm and villa, such as pennant sandstone slabs, were available locally, but others like limestone were not. The use of limestone for walling in the three main buildings of the villa complex, the villa, bathhouse and large likely agricultural building, was a clearly deliberate consumer choice and would have increased the cost of their construction. Wall foundations for the three main buildings were local sandstone but the visible walls were imported limestone. This choice again seems to be about display, as well as aesthetics as the limestone would have made a visible statement within the landscape. The limestone came from the Cotswolds and interestingly villas there in limestone areas have pennant sandstone roof tiles, so there appears to have been a two-way trade in building materials.

The overwhelming bulk of data relating to consumer behaviour from the Lyde Green villa site comes from the pottery assemblage. This relates directly to the sources of the pottery and to the products the vessels contained. In the latter category it is clear from the pottery that both olive oil and wine were being brought to the site from abroad. Olive oil was certainly coming from south-eastern France to the 2nd-3rd century farmstead. Gaulish wine, however, only seems to have found its way to Lyde Green during the villa period. It is possible that this is an indicator of greater wealth or higher aspirations on behalf of the villa's owners. During the pre-villa period finewares from central Gaul were being used but, as elsewhere in Britain, these were replaced in the Late Roman period by British produced finewares. At Lyde Green, most later finewares were products of the Oxfordshire industry, but Nene Valley and New Forest wares were also obtained. The increase in finewares in the later Roman period cannot be taken as an indication of increased wealth, they are more likely to be the result of greater consumer access to British products which replaced those previously coming from Gaul. As on many villa sites the overwhelming bulk of the pottery comprises utilitarian coarsewares.

Unsurprisingly coarsewares were largely of local derivation, with Severn Valley wares predominating into the mid-2nd century. After that date they were replaced by locally produced coarsewares and Black Burnished wares from south-east Dorset. Overall, the pattern of pottery consumption is similar to other Romano-British sites in South Gloucestershire that have corresponding periods of occupation. The site's small finds exhibited little, other than coinage, which could not have been produced locally. Although not exceptional for a Romano-British site, imperial coinage, olive oil and imported wine are all indicators that the generations that occupied the villa had more frequent engagement with international trade than their Late Iron Age ancestors. Overwhelmingly, however, throughout the Romano-British period imported items into the estate were locally or at most regionally derived.

8.4. Romano-British settlement in the vicinity of Mangotsfield, Pucklechurch and Westerleigh

The role of the villa within the local settlement hierarchy can only be explored with reference to the other Romano-British sites in the vicinity. In 1982 Russel's summary of the Roman period in Mangotsfield,

Pucklechurch and Westerleigh contained reference to only one possible site, the course of the Roman road from Sea Mills and Bath towards Gloucester (Russel 1982-19) that ran to the east of Lyde Green (Figure 8.3). Subsequent archaeological investigations, many of them initiated in response to Bristol's suburban expansion (as represented by Lyde Green), have greatly increased the evidence for Romano-British activity within the vicinity. At Cossham Street, Mangotsfield a Romano-British sarcophagus burial was found along with evidence for contemporary ironworking (Parry 1997). Romano-British enclosure ditches included ceramics of 2nd to 3rd century date and hypocaust tiles, perhaps suggesting another villa site nearby; a further potential local villa site has been identified at Moat farm, Pucklechurch 2.5km from Lyde Green (Holbrook 2006; Samuel 2000: 110). Cossham Street lay 1.8km to the south-west of the villa site at Lyde Green. A little further south at 2.7km distance from the villa site, the remains of a Romano-British settlement were found at Rodway Hill (Young 1999). A substantial sandstone building at Rodway Hill was occupied during the 3rd-4th centuries AD, with activity on the site, as at Lyde Green, possibly continuing into the 5th century (Holbrook 2006: 114; Young 1999). Evidence of industrial activity was also found across the site, with tap slag and furnace lining being recovered (Young 1999: 11).

The range of structures and artefacts from Rodway Hill were compared with those from Emersons Green Hamlets XII and XIII, off Emersons Green Lane, and considered to be similar but of 'generally lower quality' (Young 1999: 12). Emersons Green Hamlets XII and XIII excavations lay 1.5km south of the villa site at Lyde Green. There iron, copper alloy and tin were processed, and silver cupellation was undertaken (Yorkston 1998). It was considered that the evidence found was consistent with a higher status Romano-British site nearby and it was speculated in 1999 that such a site may have been represented by the building at Rodway Hill (Young 1999: 12). The nature of the evidence and location would now suggest that the evidence from Emersons Green Hamlets XII and XIII is more likely to relate to the villa site near Lyde Green than to Rodway Hill. In addition to the evidence for metalworking enclosure ditches and features relating to two likely earth-fast, post-built buildings were found (Yorkston 1998). The finds evidence indicated that site activity dated to the 3rd to 4th centuries AD, contemporary with the villa phase at Lyde Green. Perhaps the focus of the metalworking associated with Areas B and C moved west to the Emersons Green Lane site in the later 3rd century. Such a move may have been associated with the construction of the villa, perhaps to remove unsightly and smoky activities away from the villa's domestic building. Consequently, it seems quite likely that the evidence for metalworking recorded just off Emersons Green Lane in 1999 may be linked to the villa and the land on which the activities were undertaken may have formed part of its estate. The two earth-fast timber buildings are perhaps more likely to have been medieval rather than Romano-British, given the similarities with the medieval building from the villa site, and the presence of medieval material at the site at Emersons Green Lane.

The evidence indicates that there was a significant Romano-British metal working enterprise at Lyde Green during 2nd to 4th centuries, with iron working at its core. This appears to have started, possibly at a relatively small scale in the 1st century AD. The villa on the location of what was Hallen Farm was probably at the centre of these operations. This metal work industry at Lyde Green appears to have been part of a wider area of iron working in the Mangotsfield vicinity, which in turn may have been part of a more widespread metal working industry focused on the area later defined as Kingswood and including the industrial settlement at Hanham (Stiles *et al.* 1991) a few kilometres south of Lyde Green. Further evidence of Romano-British ironworking, for example, has recently been found 450m to the south-east of the Excavation Area E, at a site described as 'Ibstock Land, Emersons Green' (Brown 2016: 12), though this appears to have been small scale.

One other local site has produced evidence of Romano-British settlement. In Westerleigh pits, ditches and gullies were found during archaeological works for a pipeline in 1997 (Masser and McGill 2004: 107-114). These were considered indicative of a Romano-British settlement dating from the later 1st/early 2nd century AD through to the late 3rd and possibly early 4th century. Four unurned cremation burials of 1st to 2nd century AD date were recovered (Masser and McGill 2004: 207-208). The site lies 2.3km to the north-east of the villa at Lyde Green, just to the east of the Roman road that also runs to the east of the villa.

The Mangotsfield, Pucklechurch and Westerleigh area was an active zone of Romano-British occupation and land use which had developed out of a late prehistoric settlement and land use pattern. There appear to have been a variety of settlement types which by the later 3rd century AD at least, included villas at the top of the local settlement hierarchy. As well as agriculture, metalworking was an important local industry and may have formed part of the estate economy which allowed investment in the development of the villa at Lyde Green.

8.5. The villas of South Gloucestershire

As of November 2018, 12 villas are known within the modern unitary authority area of South Gloucestershire in addition to the site at Lyde Green (Figure 8.3). Only six were recorded in the 2014 report on the villa at

Wortley (Wilson *et al.* 2014: Fig. 2). To help contextualise the evidence from Lyde Green the information available for each of these villas is briefly reviewed below. The evidence from nearby villas outside of South Gloucestershire will also be drawn on. These villas are Brislington, which was in Somerset but is now in the Bristol unitary authority, Gatcombe in Somerset and Keynsham in the Bath and North East Somerset unitary authority. In addition, Colerne, North Wraxall, and Box are close by in west Wiltshire. Whilst some of these sites exhibit better survival of remains than those encountered at Lyde Green, none have been so extensively excavated under modern conditions, with the partial exception of Ironmongers Piece, Marshfield and the recently discovered villa at Stoke Gifford, South Gloucestershire. The other sites were either investigated many decades ago or, where more modern investigations have been undertaken, the extent or character of these has limited interpretation.

The most recently published villas that were investigated extensively are those at Ironmongers Piece, Marshfield (OS grid reference ST 7985 7602), 12.5km from Lyde Green, and Wortley (OS grid reference ST 7690 9180), some 17km to the north of Lyde Green. At both sites, excavation was concentrated on the main villa building, with only limited exploration of ancillary buildings and the surrounding environs. Excavations at Ironmongers Piece were carried out in 1982-3 by Avon County Council. They revealed an Iron Age timber round house that was rebuilt with a dry-stone wall in the late 1st century AD. In the later 3rd century, the site was totally remodelled, with a three-roomed corridor building built over the demolished circular building. It was not until the later 4th century AD that a 17-roomed villa was established, which included a bath suite. There were indications of ancillary buildings in the vicinity and the site seems to have continued in use into the 5th century (Allen *et al.* 2015 (updated 2018): ID 14094; Blockley 1985).

Wortley was excavated primarily between 1983 and 1996 (Wilson *et al.* 2014: 3). The earliest construction phase for the main villa building dated to the late 1st century AD. The building in its more developed 3rd century phase was a winged corridor villa and included

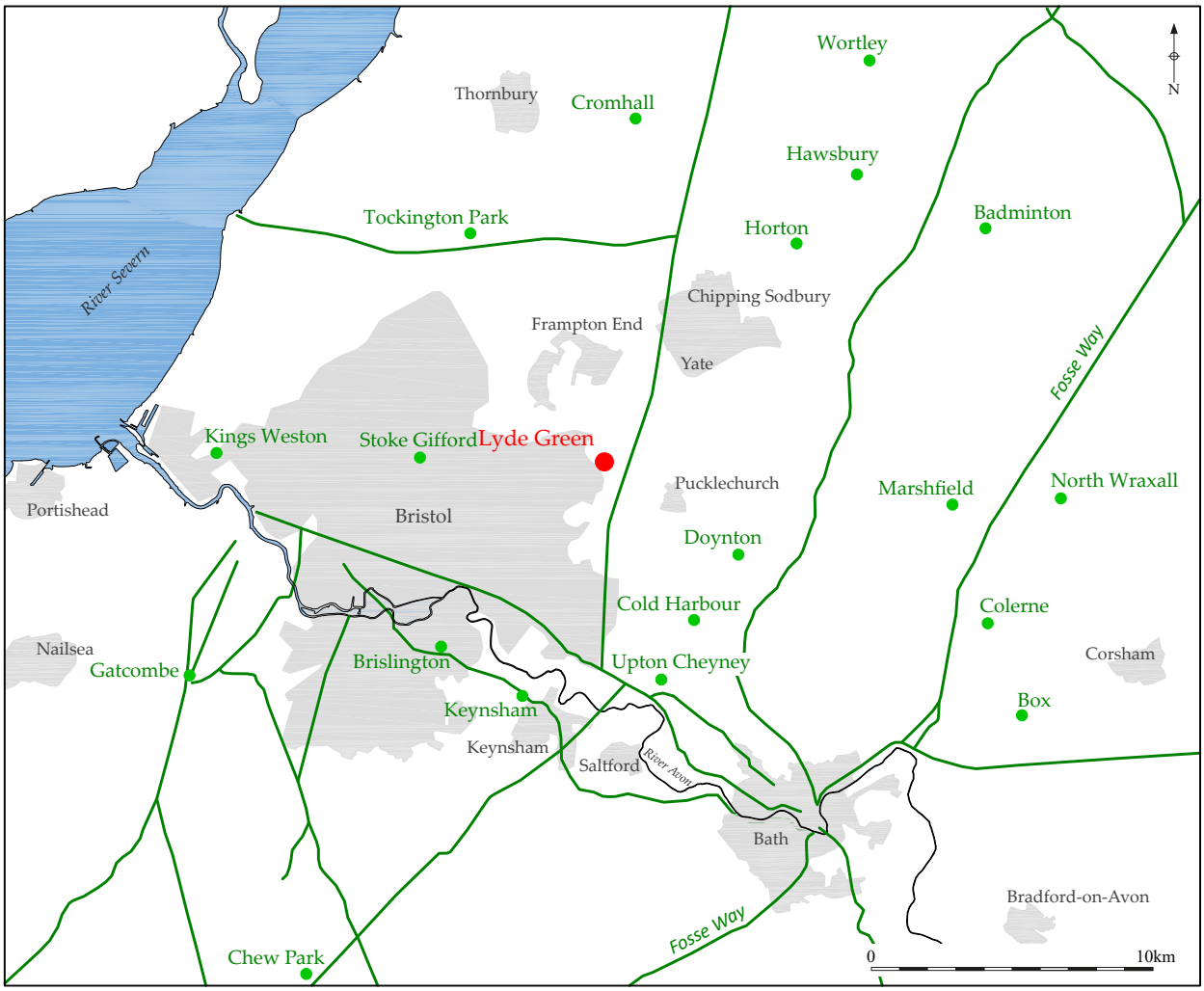


Figure 8.3 Lyde Green in the context of other Roman villa sites and the principal Roman roads in the region

a bath suite as part of its 13 rooms and a rectangular ancillary building (Wilson *et al.* 2014: 29). Other ancillary buildings were indicated by geophysical survey (Wilson *et al.* 2014: 192 & 198). In contrast to Ironmongers Piece, which only evolved into a villa around AD 360, the villa at Wortley appears to have gone into decline and contracted at this time. Nevertheless, occupation was considered to have been likely to have continued into the 5th century (Allen *et al.* 2015 (updated 2018): ID 14036).

Amongst the other villas that have been excavated to a reasonable degree are Kings Weston (otherwise known as Lawrence Weston), Tockington Park, Cromhall and Coldharbour Farm, Wick. At Kings Weston (ST 5339 7755), 13.8km to the east of Lyde Green, excavations were undertaken in 1948 (Boon 1950) with one of the excavators revisiting some of his interpretations of the site over forty years later (Boon 1993). More recently Bristol and Region Archaeological Services have undertaken some work there (Bristol and Region Archaeological Services 1995; Smith 2013) without adding to the interpretation of the site derived from the work undertaken in 1948. The 1948 excavation revealed two buildings, part of a winged corridor villa with an ancillary building and a courtyard. The winged corridor villa (43m x 17m) dated from the later 3rd to later 4th century AD. Later developments included a bath suite (Allen *et al.* 2015 (updated 2018): ID 17028; Boon 1950).

In the later 19th century a substantial villa building with a detached bathhouse was excavated at Tockington Park (MacClean 1887; 1888), (OS grid reference ST 6271 8566) 9.4km from Lyde Green. The remains discovered in the 19th century consisted of a possible courtyard villa including evidence of hypocausts and mosaics. There was little evidence for the date of the remains reported other than a coin of the 3rd-century usurper Carausius (MacClean 1888; Masser and McGill 2004: 106). As was typical of antiquarian investigations, the focus was on the main villa building and scant regard was given to either its immediate or wider environs. The gap in understanding was partially addressed when geophysical surveys were undertaken in 1996 and 1997 to the north and south of the villa building and evidence of field systems was retrieved (Masser and McGill 2004: 96-98). A subsequent trial trench evaluation in the southern survey area revealed enclosure ditches and inhumations. Most of the finds dated from the 2nd to early 3rd century and some evidence was found for Late Iron Age activity, though there was no evidence pertaining to the 1st century AD (Masser and McGill 2004: 103-104).

The excavations of the villa at Cromhall (OS grid reference ST 6858 8974), 12.3km from Lyde Green, were undertaken in 1855, though no report was published until 1911 (Conder 1909-1911). It appears to have been a winged corridor villa with evidence of mosaics and hypocausts, the latter of which may have related to a bath suite (ID 14185). Cropmarks indicating the plan of the villa were mapped as part of the Severn Vale NMP project (Crowther and Dickson 2016: 35) and the site was subject to a geophysical survey and limited trial trenching in 1980. Unfortunately very little additional information was recovered (Ellis 1987). Similarly, little information is available for the putative villa at Coldharbour Farm, Wick (ST 7066 7192), 6.5km from Lyde Green. Coldharbour Farm was excavated in 1865 and briefly published in 1868 (Pastscape, Monument No. 204952). Fourteen potential rooms were found, two having hypocausts (Scott 1993: 18). Even less is known about what can only be described as a putative villa found in 1813 at Cheyney Court Farm in the parish of Bitton, South Gloucestershire (approximate OS grid reference ST 695 698), 8km from Lyde Green. Little if anything survived by 1864 (Pastscape, Monument 200843).

More recently discovered villas that have been investigated less extensively have been identified at Horton (ST 7431 8530), Hawkesbury (ST 7645 8775) and Badminton (ST 8102 8584). At Horton, 10.3km from Lyde Green, geophysical survey revealed a villa complex comprising three buildings around a courtyard (ID 14149). A subsequent keyhole excavation undertaken in 2001-2002 concluded from coin evidence that the villa was in existence by the end of the 3rd century and went out of use later in the 4th century (South Gloucestershire Council 2002). At Hawkesbury a geophysical survey was undertaken in Stanley Meadow in 2002 and the results were tested by a trial trench. Evidence of several large structures was found around a courtyard. The complex was larger than that noted at Horton and the finds indicated an occupation period of 2nd to 3rd century AD (Osgood 2002). In 2003 the team who investigated Hawkesbury carried out a resistivity survey in the grounds of the Badminton estate. The survey revealed three buildings with a trapezoidal, walled enclosure. A trial trench over the largest, multi-roomed structure showed that the remains comprise limestone walls which in this case are still covered by painted Roman wall plaster (Osgood 2009: 204). Within an apsidal room a tessellated pavement was revealed. The evidence was considered indicative of an exceptional villa complex, with perhaps two main villa buildings facing into a courtyard (Osgood 2009: 210). The mosaic was of 4th century date and no evidence was recovered for earlier activity at the site, though circular and oval features revealed by geophysical survey, both within and adjacent to the villa enclosure, may be evidence of earlier, possibly Iron Age, structures and enclosures (ID 14039).

Two other villas, at Doynton and at Stoke Gifford, have been discovered and investigated since fieldwork at Lyde Green was completed. At Doynton, near Wick, geophysical survey and evaluation trenching have revealed evidence of a Roman villa, 5.8km from Lyde Green. Doynton villa is a multi-roomed structure including possible workshops, a surviving hypocaust and a bathhouse with a plunge pool, along with ritual sheep burials (Roberts 2014; 2016). In 2016 at Stoke Gifford, 6.6km from Lyde Green, a villa was found during archaeological investigations in advance of the redevelopment of rugby pitches belonging to the Dings Crusaders. The villa appeared to develop during the 3rd to 4th centuries but seems to have been preceded by an earlier Romano-British structure of 2nd to 3rd century date which itself was preceded by a Late Iron Age enclosure with occupation dating from the 1st to 2nd centuries AD (Bristol and Avon Archaeological Society 2017; Holt 2016: 16). In its later, most developed stage the villa was winged with a courtyard. Additionally, an ancillary building, wells and a human inhumation and one cremation burial were also found. Of all the South Gloucestershire villas, the material from Stoke Gifford most closely parallels the range of material and characteristics of the evidence from Lyde Green. Similarities between Lyde Green and Stoke Gifford may have as much to do with the modernity of the excavations and their circumstances as development-led interventions, rather than them having the greatest number of past similarities.

The Dings Crusaders site at Stoke Gifford, like Lyde Green, involved an investigation of the immediate surroundings of the villa complex, providing a similar range of evidence within a similar area to that of Area C at Lyde Green. Findings regarding this site are currently preliminary as the investigation of the excavation results has only reached the conclusion of the assessment stage (Brett and Brindle 2018). Doubtless further insights will be derived from comparing this site to Lyde Green when the Dings Crusader's site is fully analysed and published.

Six other villas serve as local comparators, one in Bristol, Brislington (ST 6161 7018), two in Somerset, Gatcombe (ST 5273 6995) and Keynsham (ST 6456 6922) and three in Wiltshire, North Wraxall (ST 8370 7624), Box (ST 8232 6853) and Colerne (ST 8110 7180). All may have been within the territory of the Dobunni. Like many of the other sites, Brislington, 8.8km from Lyde Green, was investigated in the 19th century. A winged corridor villa was excavated in 1899, measuring 40x23m in size. There appear to have been ten rooms including a bath suite to the rear with hypocausts, and mosaic floors (Barker 1900: 291). Evidence was found of small-scale metalworking. The villa appears to have dated to the late 3rd to late 4th century AD. Earlier activity may have been missed during the antiquarian excavations, but an evaluation in 2005, some 50m west of the villa, revealed a possible boundary ditch containing 3rd century pottery (Cullen 2005), indicating that the ditch was contemporary or earlier.

The site of Gatcombe in north Somerset, 16.6km distant from Lyde Green, is now known to be a larger and defended settlement (Smisson and Groves 2014), though it was possibly a village that was attached to a villa estate (Branigan and Blagg 1977). At Gatcombe the existence of a villa-type building at the southern end of the defended Romano-British site is indicated by the discovery of a colonnade, a mosaic, a stretch of well-built masonry, a finely carved table-top, hypocaust tiles and baluster bases. A possible bathhouse lay to the north (Smith *et al.* 2018). The main period of occupation appears to have commenced in the late 3rd century, but Branigan considered that the occupation of the site extended well into the 5th century, at least as a possible post-villa estate farmstead. In 2013 a geophysical survey and trial trench evaluation 250m east of the settlement revealed two enclosures, the boundary ditches of which infilled in the 1st to early 2nd century AD (Joyce 2013), suggesting, as at Lyde Green, a farmed landscape with a nearby contemporary settlement which pre-dated any villa.

Keynsham, 8.8km south of Lyde Green, was excavated in 1922-1924 (Bulleid 1923; Bulleid and Horne 1926) with further investigations in 1998 and 2015 (Cox 1998; Smith *et al.* 2018). The various interventions revealed parts of an extensive Romano-British villa complex covering *c.* 0.6ha, with a large and elaborate villa consisting of three corridor ranges round a courtyard. Two heated hexagonal rooms with mosaics were observed and have been interpreted as dining rooms (Russell 1985). Investigations in 2015 recovered evidence suggesting that the villa complex originated in the later 3rd century (Holley and Pratt 2016: 56) and all works have indicated that the villa was occupied throughout the 4th century. None of the investigations found evidence for ancillary agricultural or industrial structures.

In Wiltshire the villa at Colerne is 14.8km east of Lyde Green. Antiquarian excavations there revealed a substantial winged corridor-type villa building, its footprint measuring 26x18m. It faced southward and had 12 rooms, including a bath suite and mosaic floors. Evidence of other masonry buildings was also found. The only known dating evidence found was a few 4th century coins (Goodwin 1856). Unlike many of the other villas investigated originally by antiquarians, no more recent explorations have been undertaken.

The villa at Truckle Hill, North Wraxall, 16.3 km distant from Lyde Green, was excavated in 1859-60 when a villa

containing sixteen rooms, including a bath suite, was revealed. A courtyard, ancillary buildings and a cemetery with four burials were also discovered (Scrope 1862). A detached bathhouse was investigated 150m away from the main villa building by Wessex Archaeology in 2008. The bathhouse was built between the late 2nd and early 4th centuries, with part of it rebuilt and used as a corn drier later in the 4th century (Andrews 2009; Wessex Archaeology 2008). A subsequent and associated geophysical survey of the villa remains confirmed the accuracy of Scrope's 19th century plan and revealed previously unknown features. These included a large ditch to the west and south of the villa complex, possibly defensive in character and tentatively considered a late Roman feature. Further weak curvilinear anomalies to the south of this enclosure ditch were tentatively considered to indicate possible late prehistoric or early Roman archaeological features (Sabin and Donaldson 2008: 24-25).

Another Wiltshire site is the villa at Box, which lies 17.4km from Lyde Green. Investigations in the 19th century and again in the 1960s revealed a major Romano-British courtyard villa. With at least 50 ground floor rooms, nearly half of which had mosaic floors, and many heated rooms and one bath suite (Hurst *et al.* 1987), this was a much larger and grander establishment than that found at Lyde Green. Indeed, it would have been grander than most of the other examples within the vicinity of Lyde Green. This courtyard villa appears to have been developed in the later 3rd century. It seems to have been preceded by a winged corridor villa in the early 3rd century AD, which may also have been a successor to an earlier 2nd century occupation phase featuring a substantial masonry building. There is evidence of other buildings forming part of the villa complex (Smith *et al.* 2018).

In summary, within a radius of about 17km of Lyde Green there are 18 known Romano-British villas (Table 8.1). Most of these villas are situated at a height of between 60 and 120m above Ordnance Datum. Villas were present in the vicinity before the late 3rd century, but most date to the late 3rd to 4th century AD and are thus a reflection of specific historical circumstances. Where recent excavations have been undertaken into the wider environs of the villas, it seems they evolved out of earlier Romano-British settlement patterns. These settlements themselves appear to have been derived from Late Iron Age predecessors fitting within an earlier pattern of agricultural enclosure.

Even given the definition prescribed in this discussion, villas came in different shapes and sizes. As Smith (2002) made clear in his Empire-wide study, there were many variants in plan layout adapted to the peculiar needs of their occupiers and a considerable range in size, from a few rooms to multiple suites. Most villas in South Gloucestershire based on Smith's review and classification were not especially large or lavish, though it is accepted that a single landowner may have had multiple residences ranging from the palatial to the cottage. In such cases the difference in size would reflect the villa's function in an owner's range of residences, rather than being a one-off expression of the owner's wealth and status. Whether the house of the principal estate of an owner, or part of a suite of properties, most of South Gloucestershire's villas and others local to Lyde Green, had ground floor plans with evidence of 10 to 20 rooms. This is far removed from the palatial structures like that at Great Witcombe, which had at its zenith in excess of 40 ground floor rooms (Holbrook 2003: 184, Fig. 3).

The largest villas, whether part of a portfolio of properties or a single residence, were clearly expressions of an owner's wealth and perceived significance. Villa adoption across time also seems related to social class. Early adoption in the later 1st century AD, as at sites like Ditches near Bagendon (Trow *et al.* 2009), likely related to the highest elite within the tribal society of

Table 8.1 Attributes of villas within c. 17 km of Lyde Green

Villa	Bath house	Bath suite	Mosaic	Hypocaust	Tiled roof	Ancillary buildings	Painted wall plaster	Iron Age antecedents	Evidence of iron working
Lyde Green	●				●	●	●	●	●
Tockington Park	●		●	●					
Cromhall			●	●		●			
Wortley	●	●				●	●		
Hawkesbury	●					●			●
Horton						●			
Badminton			●			●			
Doynton	●			●		●			
Marshfield		●			●	●	●	●	●
Stoke Gifford				●	●	●		●	
Kings Weston		●	●	●		●		●	
Coldharbour farm				●					
Upton Cheyney									
Gatcombe	●		●	●		●		●	●
Brislington		●		●					●
Keynsham			●						
North Wraxall	●	●				●			
Colerne		●	●			●		●	
Box		●	●	●		●			

the Dobbuni. The reasons for such early adoption are complex but were undoubtedly linked to conveying messages concerning familial identity, allegiance, and status. Early adoption of villa living by the highest members of a tribal elite doubtless was intended as an architectural statement of the acceptance of *Romanitas*. Later adoption may have had more to do with emulation of social superiors and was a projection of the owner's own opinion of their social status, economic success and a desire to achieve such status and success (Bowes 2010: 95-97). Hence an entirely social rather than a political act.

Millett argued that later villas were generally smaller than earlier ones (1990: 94), though this does not seem to be the case in South Gloucestershire or the wider Severn/Cotswold sub-region. He implied that as villas declined in mean size in the later Roman period, the justification for the appearance of villas being consequent upon rural prosperity was invalid. Arguing that the larger earlier villas appeared as new establishments before any great economic changes had taken place in Late Iron Age society, he concluded villas could not be linked to increasing rural productivity but were evidence of the desire of their owners to appear Romanised (Millett 1990: 94). While the motivation of the earlier villa owners may not have been an expression of newly acquired wealth, but a political decision, this argument should not necessarily be applied to villas built 200 years later.

Viewed individually, the villas of South Gloucestershire appear as indicators of success and aspiration. At Lyde Green the villa represents an expansion in the scale and degree of civility and luxury over the lifestyle followed by the occupiers of the preceding farmstead. It suggests the late 3rd century expression of its owners' desires and/or achievements in a way that would have been understood by other Roman citizens across the Empire. In contrast to theories of cultural change that rely on reactions to external stimuli as an explanation, such an hypothesis gives far greater agency to the native provincial rural population in shaping the landscape and expressing their social outlook (Taylor 2013). It was both social emulation and a declaration of success rooted in prosperity achieved at a particular point in time, so while, as Millett states, villas were a direct result of expenditure rather than production (1990: 189), there was nevertheless a link to production. For a villa to be built the desire to own one had to exist alongside the capacity to pay for one and the availability of labour capable of building one. It seems that for a certain section of society in parts of Britannia, local large landowners, these conditions were all met in the later 3rd century AD. Similar observations have been made for the villas of south Wales on the other side of the Severn to Lyde Green. There it has been argued that 'the villas were as much units of agricultural production as they were aristocratic (or, at least, more affluent) rural residences' (Seaman 2018: 125).

Burial is one area where the evidence from Lyde Green is particularly strong in relation to many of the other villa sites from the locality. Only the later cremations can be associated definitively with the villa and the earlier cremations are likely to have been associated with the preceding farmstead. Only a third of known villa sites have human burials associated with them (Smith *et al.* 2018: 247). In the study area only Stoke Gifford has a similar incorporation of burials within the wider villa estate, instead of placement in defined cemeteries. Here there are four inhumations in non-cist graves and one cremation, but, unlike at Lyde Green, the inhumed burials included human remains (Brett and Brindle 2018: 29-30). In addition there was one likely empty stone-lined cist grave (Brett and Brindle 2018: 31). At Truckle Hill, North Wraxall, five masonry tombs were found 60m west of the villa within a cemetery area and each contained human remains within stone or wooden coffins (Andrews 2009; Smith *et al.* 2018: 249). Unlike the Lyde Green cist burials this is clear evidence of higher status burials and doubtless those of the villa owning family. Again, in a cemetery, the previously mentioned burials at Tockington Park comprised five inhumation burials considered to date to the late 2nd to early 3rd centuries AD (Masser and McGill 2004: 99 and 105). As with most of the burials at Stoke Gifford they were non-cist graves. The burials predate the explored villa building at Tockington Park, though this does not mean that they predated, or were unassociated with, the estate in which the villa was built.

Without wishing to stretch the limited archaeological evidence too far it is worth noting that there may be a link between burial rite, class and religious affiliation. Whereas inhumation in the 4th century AD could be a Christian or pagan burial rite, cremation was exclusively pagan. It is in the Cotswold/Severn area of Britannia Prima, and especially from villas, that much previous evidence for Christianity has been recovered. This has led to the view that Christianity was associated with the rural landowning elite (White 2018: 117).

It is difficult to draw many solid conclusions from this brief analysis of the shared characteristics of the villas local to Lyde Green because of the considerable variety in the approaches taken to their excavation and the likely deficiencies in recording from some of the earlier investigations. Put simply, some of the characteristics recorded at the recent and extensive excavations at Lyde Green and Stoke Gifford may well be present at the other sites, but the evidence has either yet to be revealed, or was revealed and not recorded (or at least not published). Two of the areas in which it is

highly likely that evidence has yet to be revealed, or recognised, lie at either end of the villa story. There is a high likelihood that many of these sites have earlier Romano-British and Iron Age antecedents. Secondly, for those villas in existence in the 4th century AD, their possible continuance into the early 5th century AD may need further examination. Where wider landscape-scale and in-depth investigations have been undertaken, as at Frocester (Price 2000b; 2010) in the Cotswold/Severn sub-region, antecedents extending back to the Iron Age and occupation into at least the earlier 5th century have been evidenced. South Gloucestershire lacked such extensive investigations, prior to work at Lyde Green and more recently Stoke Gifford, even so some broad conclusions are possible relating to the area's villas within their chronological and societal context.

8.6. South Gloucestershire's villas and the Late Roman villa

There is a marked increase in the number of villas in the locality from the late 3rd century. Why might this have occurred and what could it signify about the wider Romano-British countryside and society? The rise in numbers and visible wealth displayed in Late Romano-British villas has been seen to stand in contrast to the perceived evidence for decline at Late Romano-British town sites in the 3rd century AD (Burnham and Wacher 1990: 314). This long-held archaeological view has been challenged, however, most notably by Adam Rogers. Rogers notes in particular the continued use and maintenance of public buildings and spaces within later Romano-British towns, as well as in some cases their improvement (Rogers 2010; 2011).

There is increasing evidence for the continued use of towns, especially in the west of Britain into the 5th and even 6th centuries (Dark 2010: 105). Monumental structures, such as the temple to Sulis Minerva in Bath, were not demolished until as late as the mid-5th century (Gerrard 2007). Millett suggested that elites, resident in towns during the 1st and 2nd centuries AD moved to their country estates in the 3rd century and it was there that they focused their displays of wealth rather than investing in the urban fabric (1990: 195). This was not urban decline but a change in elite investment priorities, though whether this shift in investment was linked to physical movement away from towns is uncertain. There was no decline in the Cotswold/Severn sub-region in residency in towns in the 3rd century for which the counter point was the establishment of villas. Indeed, the small Roman town at Hall End, Wickwar in South Gloucestershire was thriving during the 2nd and 4th centuries, the same period in which many of the local villas were flourishing (Young 2009). Evidence, from Lyde Green and other villa sites, suggests that in many instances the villas of the late 3rd century AD were not new establishments but the latest iteration of a rural residence and probably an estate centre, that had evolved since the Late Iron Age. It is highly likely that the rural elite had town houses in local towns as well as rural residences probably from at least the early 2nd century, and it is possible that from the late 3rd century they spent less time in the towns and more time in their rural residences. Whether or not this is the case, the villas show that from the late 3rd century the local elites were investing their wealth in their rural residences, possibly having previously focused on the civic embellishment of towns.

Even if there is no direct link between a supposed decline in urban life and a growth in villa numbers and in their prominence during the 3rd to 4th century, villas and towns operated and interrelated within a settlement hierarchy. The villas and small farmsteads of South Gloucestershire would have interacted, administratively, economically and socially with the larger towns at Sea Mills, Bath and Cirencester, the smaller towns at Wickwar (Young 2009) and Keynsham (Browne 1987; Higgins 2003) as well as industrial settlements as at Hanham (Holbrook 2006: 112; Stiles *et al.* 1991). The relationship between town and countryside in the Roman Empire has often dominated discussions of villa distributions, their role, purpose and significance (Roymans and Derks 2011: 14). The idea that villas clustered around towns and that there was a fall-off in density the further away from a town you went, has been around for many years (Hodder and Millett 1980). It was argued that one of the greatest concentrations of villas in Britain was clustered around the Roman town of Bath (Davenport 1994). The definition of a cluster, however, depends on the definition of an area, the perspective taken and the known distribution at the time of analysis. Some of the villas taken to cluster around Bath could be considered part of the wider distribution in the Severn/Cotswold region. The villas of South Gloucestershire, the known density of which has increased recently, in part because of a concentration in present day development to the north-east of Bristol, fall in an area between the Roman towns of Sea Mills, Somerdale (Keynsham), Bath and Cirencester. They do not cluster around any one town. Simon Clarke noted 25 years ago that there was no evidence of clustering around Cirencester or Gloucester in the Severn/Cotswold region (1996). He argued instead that they clustered around Iron Age tribal centres of the Dobunni (Clarke 1996: 73). Interesting in its approach as Clarke's paper was, it drew on insufficient data. The known villas of South Gloucestershire have almost doubled in number since Clarke's paper and they show neither a clustering effect around a Romano-British town nor a pre-existing Dobunnic Iron Age centre. Instead, they indicate that the wider countryside of the Cotswold/

Severn sub-region was generally rich in villas. Where other regional analysis has been undertaken, as in south-east England, little pattern of clustering in relation to towns has been recognised (Taylor 2011: 183).

The difficulty of trying to interpret patterns of sites at a local level is usually compounded by a lack of data that makes analysis of distributions problematic. Few areas have been subject to the level of archaeological investigations in recent decades as undertaken within the Lyde Green vicinity, resulting from the growth of Bristol's suburbs. The expansion in archaeological knowledge has been discussed in the introduction to this chapter and in the review of Iron Age and Romano-British archaeology in the Mangotsfield vicinity. This indicates that it was conditions in the countryside more widely that led to villa development, rather than to associations with foci of attraction. The contentions based on the South Gloucestershire evidence are that the motivations for villa development were individualistic and widespread, locally particular but readily repeatable.

As a group expression of wealth, taken together with the appearance of the villas in the later 3rd century must be an expression of prosperity in the countryside (Millett 1990: 94), for a certain class of landowner. Indeed, the villa, even the typically moderately sized villa of the late 3rd to 4th centuries is seen as a site for conspicuous display, the capacity for which would have been possessed by only a small minority of the inhabitants of Roman Britain (Gerrard 2013: 133). The villa indicates in its layout and embellishments that its owners lived a very different lifestyle to that of the owners of a farmstead (Perring 2002: 155-156), such as that found in Lyde Green Area D. Although at Lyde Green this change has been speculated as being at least in part based on profits from iron working, more generally villas have been considered an expression of wealth derived from agriculture. Growth in prosperity has especially been linked to the production of a commercial surplus through cereal growing and/or processing (Frere 1987: 258). Sites, especially in southern England, have provided evidence suggesting a move away from a subsistence to a more commercial agricultural economy in the 3rd to 4th centuries AD, as

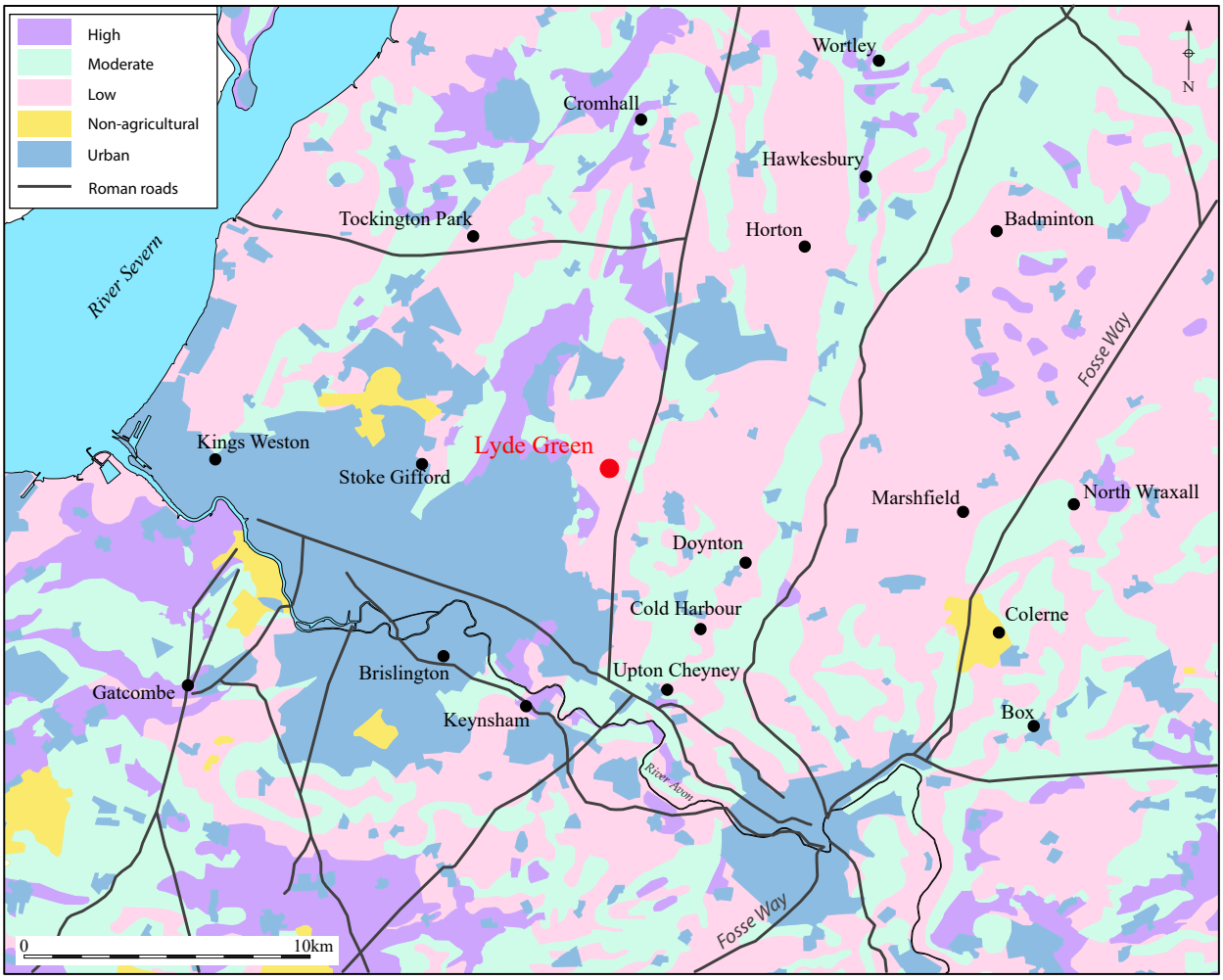


Figure 8.4 Map of villa sites in the region related to modern land-use

at Monkston Park, Milton Keynes (Bull and Davis 2006: 53).

The late 3rd century into the 4th century has long been considered a period that saw 'a flowering of the countryside' (Millett 1990: 181). Indeed, a sort of technological revolution took place in agriculture in the Late Roman period that can be compared to the later technological developments that occurred in the 18th-century English countryside. This is evidenced by changing artefacts associated with agriculture showing the introduction of the scythe, new types of hand querns and heavier ploughs (Rees 2011: 89). As Gerrard has noted 'the late Romano-British economy was almost completely orientated towards agrarian production' and he has deduced evidence for significant grain exports at least in some years in the mid-4th century (2013: 99). At Lyde Green this agrarian production is likely to have been on their doorstep and, combined with the evidence for iron production, it suggests that the wealth accrued to build the villa came from local production and not from production located elsewhere (Smith *et al.* 2016: 37).

There is a geographical correlation between good agricultural land, especially for arable production, and the distribution of 3rd to 4th century villas (Figure 8.4). They are relatively prolific in the Cotswold/Severn sub-region, for example, and amongst their more northerly redoubts are the rich cultivatable lands of East Yorkshire, but their presence is not confirmed in Cumbria or Lancashire (Smith *et al.* 2016: Fig. 2.19). The most northerly group of known villas in Britain, those in the Tees valley, were all established on decent soils (Willis and Carne 2013: 189), though here nearness to a military market may have made tillage more commercially viable in a more challenging environment (Willis and Carne 2013: 188). Wetter and colder climes, often with poor soils resulting in less productive cultivatable land, appear to equate with a lack of villas. In studying the distribution of villas as mapped in 2001, a distribution which in its broad outline is little changed despite the subsequent discovery of many new villas, Andrew Sargent (2002) argued that climate and better soils alone could not account for the distribution. He argued that the economy of the Romano-British north and west developed differently to that in the south and east and was likely related to a greater dependency on the military market in the north and west (Sargent 2002: 225). This does not really explain the lack of villas in the south-west peninsula, however, nor account for the greatest density of villas, including those in South Gloucestershire, being in the area defined as champion land in the medieval and post-medieval periods. These are the areas dominated by regular open field farming systems in the Middle Ages and where degrees of settlement dispersion were lowest (Williamson *et al.* 2013: Fig. 3).

The adoption of villa living as with many other aspects of Roman-derived material culture has been frequently interpreted as evidence for increasing Romanisation throughout society. Such has been the past dominance of this approach that Romano-British archaeology's 'love affair with Romanisation, identity and post-colonial theory' has been considered to limit understanding about Romano-British culture and society (Gerrard 2013: 75). This kind of interpretation, first proposed by Haverfield (1906), was evident in RG Collingwood's (1930) account of the nature of villas and was further emphasised by Rivet (1969) and in a more nuanced way by Millett (1990). It is no longer sustainable. For some time, this concept, especially when allied to post-processual approaches intent on a social explanation for much archaeological evidence of past activity, has constrained and limited discussions of villas, framing the villa exclusively as an expression of identity in which the villa owner flagged their adoption of a Roman lifestyle.

As Trow stated, 'Romano-British villas have long been seen as mostly built by indigenes adopting imperial lifestyles rather than by colonial incomers' (2009: 67). Later villas especially have been examined as an aspect of indigenous British culture (Scott 1988). Native ownership certainly appears to fit the narrative at Lyde Green, where the villa can be perceived as just one stage in a continuum of local settlement development from the Late Iron Age. The villa need not be viewed as a gauge of Romanisation, however. In the 1st century AD it was politically expedient, for those highest echelons of British society that did not resist Rome, to embrace Roman ways. No such circumstances pertained for those local elites who built villas in the 3rd to 4th centuries, for whom the question of their identity as Roman or Briton is unlikely to have arisen. At Lyde Green, the adoption of a rectangular, multi celled and possibly two storied house in the 2nd century may be an indicator of the local elite adopting a Roman style of living. The move to a villa in the later 3rd century at Lyde Green, however, is very unlikely to have represented any change in the inhabitant's consideration of their identity. Rather it may indicate increasing wealth and/or social aspiration or was simply just a 'keeping up with the Jones's' fashion trend.

At Lyde Green, broadly contemporary with the development of the villa, money appears to have become more readily available. There was only one 2nd-century coin and five 3rd-century coins pre-dating the last quarter of the 3rd century and all were found in Area B, the location of the villa. No coins were associated with the presumed farmstead building. Such developments need not be seen in the context of change in cultural allegiance, as an expression of identity, but rather as consumer engagement with the emergence of new opportunities offered by a more 'globalized' market

(Pitts 2008). Using globalization theory as a medium to review the changes in Romano-British engagement with material culture allows a 'more complex world view in which cultural change could be multidirectional and differentially negotiated in individual localities', providing 'perspective which offers the potential for incorporating local experience and diversity into grand narrative' (Pitts 2008: 494). This viewpoint chimes with the evidence from Lyde Green. Here in the early Roman period, local decisions implemented by local landholders on the development of an estate were made in the context of wider societal changes over which they had no influence. Such societal changes included incorporation into a foreign Empire, imperial policy decisions and new and wider consumer options. Later, technological innovation and improved market opportunities and connectivity networks formed a context in which local land management and production decisions, as well as consumer choices, were enacted.

By the late 3rd century, the incorporation of the Cotswold/Severn sub-region into the Roman Empire had been a fact for many generations. Villa owning families probably still considered themselves Dobunnic as well as being citizens of the Roman Empire in which they were elite members of local provincial society. Identities are never 'either or', they are always multiple, nested and overlapping (Taylor 2013: 177). Villas in late 3rd and 4th century South Gloucestershire, as elsewhere in Britannia, were less expressions of *Romanitas* and more provincial expressions of class emulation and status.

Evidence for villa occupation into the 5th century is not especially common, but neither is it very rare (Dark 2010: 113). A new appreciation of chronologies for Late Roman Britain and sub-Roman Britain, pioneered in south-west England by James Gerrard, indicates that on sites for where there is no clear evidence for continuity beyond the late 4th century a fresh look at the data may increase the possibility of 5th century continuity (Fitzpatrick-Matthews and Fleming 2016; Gerrard 2004: 71-72). At Lyde Green the latest coin dates to AD 388-395. The occurrence of Roman shell-tempered ware pottery also indicates late 4th century activity on site, as do fragments of two Oxfordshire red-slipped bowls of a form that post-dates AD 350. The considerable occurrence of south-east Dorset-derived Black-Burnished ware in the final Romano-British stratigraphic phase of occupation in Area B, suggests late 4th-century material that may well have continued in production into the early 5th century (Gerrard 2014). In general, analysis of the artefacts from Lyde Green hints at the possibility that occupation of the villa at Lyde Green may have continued into the second decade of the 5th century at least.

After the end of occupation, it seems as if the estate was thoroughly abandoned, at least in relation to direct occupation of the areas continually occupied from the Iron Age. There is no clear indication from the archaeological evidence at Lyde Green as to why this happened, so to offer an explanation falls back on wider observations concerning the province of Britannia Prima. In general, there appears to have been a decline in population in the Late Roman period (Rippon 2018: 96). During the 5th century it is considered that the economic and political structures of the elites of the Severn/Cotswold sub-region were disrupted leading to a transfer of power and influence in the province away from the east of the province to the west (White 2018: 116-117). It is within this context that the abandonment of the villa at Lyde Green, and the ending of the other villas in South Gloucestershire, should be seen. Without a settlement, the land use of the associated estate may have changed with less tillage and more grazing and woodland, allowing the landscape to take on the character it had in the medieval period. In general, in the Central Zone defined for the 'Fields of Britannia' project, within which South Gloucestershire lies towards the southern extremity, the pollen evidence indicates changes in land use between the Romano-British and Early medieval periods. The Early medieval period witnessed a slight reduction in arable and improved pasture with corresponding increases in woodland and unimproved pasture (Rippon 2018: 101 & Fig. 9.4).

At Lyde Green continuity of occupation is indicated across the landscape probably from the 1st century BC until the 5th century AD, with one area of intensive activity chronologically succeeding another. The linkage at Lyde Green between a 2nd-3rd century farmstead and a late 3rd to 4th century villa, as seen at other sites such as Brixworth in Northamptonshire (de la Bédoyère 1993: 66), is probably one that can be made with many villa sites (Smith *et al.* 2016: 34). The well-known 20th-century excavations in the upper Thames valley, undertaken at Barton Court Farm, Oxfordshire, revealed a similar settlement sequence to that observed at Lyde Green. There a Late Iron Age farmstead was replaced by a late 1st century AD farmstead. After a lacuna in activity on the excavated site, a late 3rd century farmstead, which would qualify as a small villa, was established. The excavators conceded that this gap may not be real, in terms of continuity of a farmstead estate, as a successor to the late 1st -century AD farm and a predecessor to the late 3rd century small villa may have been located close by but outside of the area archaeologically investigated (Miles 1986: 49-50). A more recent excavation of parts of a villa estate landscape at Cottingham in East Yorkshire revealed a late 3rd to 4th-century villa complex around a courtyard that developed within an existing pattern of land division originating in the Later Iron Age. The villa complex also seems to have been preceded by an earlier Romano-British farmstead of 2nd century



origins (Rose and Williams 2020: 74-75). What Lyde Green, Barton Court Farm and Cottingham all shared was the opportunity for excavators to examine large areas spread across the local landscape. In the case of Lyde Green and Cottingham, the focus of investigations was not targeted on a known Roman villa building but on zones of archaeological potential within the context of areas chosen for modern development. In the past the lack of such an opportunity at most villa sites has conditioned the evidence available and thus shaped the story told. Consequently, the possible links between the villa and earlier pre-existing estate structures and features, likely stretching back into prehistory, could not be recognised and made evident.

The recently excavated Dings Crusaders site at Stoke Gifford is the only other villa complex in South Gloucestershire that shares these characteristics of wider landscape investigation with Lyde Green. As a result, the likelihood of other sites in this county fitting a similar pattern of development can only be surmised. Elsewhere in the Cotswold/Severn sub-region, however, at least six likely villa sites have been recognised as having non-villa farmstead antecedents in the Severn Vale, with a further seven in the Cotswold Hills (Timby in Allen *et al.* 2017: 311). The most extensively investigated of these is at Frocester Court. Over a period of decades, a villa complex and its associated landscape was investigated. This villa was shown to have developed out of a mixed farming economy with Iron Age antecedents (Price 2000b; 2010), as at Lyde Green.

As at Frocester Court, the opportunity to examine the whole of a villa complex in a wider landscape, including ancillary buildings and earlier landscape development, has enabled a more comprehensive understanding of how a late Romano-British villa may have evolved and operated. The likelihood that such an opportunity would enhance the understanding of villas was highlighted in the 'New visions of the countryside of Roman Britain' project (Smith *et al.* 2016: 37). At Lyde Green, and more recently at Stoke Gifford (Brett and Brindle 2018), recent excavations in South Gloucestershire, responding to modern development proposals, have widely sampled villa associated landscapes. The excavations at Lyde Green went beyond the excavation of the villa complex and the range of structures within the villa compound, examining the wider vicinity and were thus able to set the villa within the context of a chronological landscape development. This opportunity allowed the archaeological evidence to be viewed as a related whole, rather than as individual sites whose physical separation, when allied to temporal difference, has previously led to interpretive isolation. This showed that the villa was likely the product of indigenous peoples who were powerful agents within society and the local economy from the Late Iron Age through to perhaps the early 5th century AD.

Chapter 9

Appendices

Appendix 1: Catalogue of Bronze Age pottery

By Robert Young

Vessel 1: Excavation Area E, context 2126

Vessel 1 is incomplete and highly fragmented. Its remains consist of a total of 178 broken and abraded body sherds, and one possible base sherd. In form it appears to have been a straight-sided, barrel/bucket-shaped vessel. Some sherds appear to have been over-fired and have a bright orange/red colour on their external surfaces, with some spalling evident. The vessel exhibits an orange/red oxidized outer surface, with a grey/black core and inner surface. Max Sherd Size: 58mm x 36mm x 10mm. Min. Sherd Size: 11mm x 11mm x 6mm. Max. Wall Thickness: 8-10mm.Total Weight: 434g. Fabric 1.

Vessel 2: Excavation Area E, context 2126

Vessel 2 is incomplete and highly fragmented. Its remains consist of 38 abraded body sherds. In form the vessel appears to have been a straight-sided, barrel/bucket-shaped vessel with orange/brown oxidized inner and outer surfaces, and a black/grey core. Max. Sherd Size: 45mm x 36mm x 9mm. Min. Sherd Size: 13mm x 10mm x 8mm. Max. Wall Thickness: 9mm – 10mm. Total Weight: 96g. Fabric 1.

Vessel 3: Excavation Area E, context 2126

Vessel 3 is incomplete and highly fragmented. Its remains consist of 30 abraded sherds (23 body sherds and 7 rim sherds, two of which conjoin). In form it appears to have been a straight-sided, barrel/bucket-shaped vessel. Mainly reduced external and internal faces can be observed, with a reduced black/grey core. The vessel rim is small and slightly everted, with a flattened top and slight, internal rim bevel. The fragments are too small to allow calculation of the rim diameter. Max. Sherd Size: 34mm x 30mm x 9mm. Min. Sherd Size: 15mm x 11mm x 7mm. Max. Wall Thickness: 11mm. Total Weight: 72 g. Fabric 1.

Vessel 4: Evaluation Trench 20, context 2005

Vessel 4 is incomplete and highly fragmented. Its remains consist of 48 abraded sherds (17 base sherds and 31 body sherds). In form it appears to have been a straight-sided, barrel/bucket-shaped vessel. Many of the base sherds conjoin to produce a diameter of 16cm. Wall Thickness at Base: 11-12mm. Base Thickness: 18mm. Max. Sherd Size: 69mm x 69mm x 18mm. Min. Sherd Size: 15mm x 11mm x 8mm. Total weight: 472g.

Appendix 2: Table of radiocarbon dates

Table 9.1 Summary of radiocarbon dates

Sample	Species dated	Area	Phase	Context	Context description	Lab and code	C^{14} age BP	1σ 68.3%	Prob. dist.	2 σ 95.4%	Prob. dist.
1	*Salix/Populus*	A	1	1007	Fill of pit [1006]	UBA-36894	2425±48	cal BC 731-691	0.196	cal BC 755-680	0.211
								cal BC 660-650	0.041	cal BC 670-608	0.129
								cal BC 544-408	0.762	cal BC 596-401	0.66
13	*Quercus sp.*	E	1	2126	Fill of pit [2120]	UBA-36892	3399±41	cal BC 1743-1707	0.385	cal BC 1875-1842	0.044
								cal BC 1704-1642	0.615	cal BC 1818-1798	0.018
										cal BC 1780-1611	0.937
19	*Alnus sp.*	D	9	1079	Layer sealing Romano-British Strucutre {1650}	UBA-36893	217±30	cal AD 1649-1675	0.44	cal AD 1643-1683	0.374
								cal AD 1777-1799	0.43	cal AD 1735-1805	0.505
								cal AD 1941-1950*	0.13	cal AD 1932-1950*	0.121
80	*Rosaceae*	D	4	1284	Cremation no. 11, fill of urn	UBA-36895	2013±25	cal BC 42- cal AD 16	1	cal BC 87-AD 77	0.19
										cal BC 56- cal AD 55	0.981
194	*cf. Sorbus sp.*	B	4	3272	Lowest fill of well [3222]	UBA-36898	1708±26	cal AD 262-276	0.179	cal AD 253-304	0.291
								cal AD 328-385	0.821	cal AD 313-397	0.709
351	*Triticum sp.*	B	4b	3829	Deposit sealing structure {3583}	UBA-36899	1759±25	cal AD 242-261	0.268	cal AD 218-354	0.987
								cal AD 278-327	0.732	cal AD 367-379	0.013
390	*Triticum aestivum ssp. Spelta*	B	1	3904	Fill of ditch [3901]	UBA-36901	2091±43	cal BC 167-54	1	cal BC 344-323	0.022
										cal BC 205- cal AD 3	0.978
429	*cf. Hordeum sp.*	B	4	4083	Fill of posthole [4082], one of a group associated with Structure {4235}	UBA-36900	1755±30	cal AD 242-264	0.263	cal AD 214-385	1
								cal AD 273-330	0.737		

Appendix 3: Catalogue of decorated Samian and Samian stamps

By G. Monteil

Introduction

Eleven name stamps and 22 sherds of decorated Samian ware from two areas of excavation were submitted for analysis. Each sherd was examined, after taking a small fresh break, under a x 20 binocular microscope as a first means to differentiate the fabric and production centre. A catalogue was then compiled where each entry consists of a context number alongside form, fabric and decoration identification when possible with a date range.

Assemblage range

The decorated assemblage is made up of 22 sherds which represent a maximum number of nine vessels. Two fragments were too small or abraded for comment, both from Area C and Central Gaulish bodysherds (deposits 2222 and 2417).

The earliest material was recovered from Area C with two South Gaulish vessels, one from La Graufesenque dating to the Flavian period (D5), another from Montans dating to the first half of the 2nd *c.* AD (D1) and a Central Gaulish bowl by early Lezoux potter *Butrio* (D4). By contrast, the three decorated bowls recovered from Area B are later with styles consistent with the second half of the 2nd *c.* AD (D7 to 10).

All of the name stamps are by Lezoux potters of the Antonine or late Antonine periods (S1 to 11). One is a new die by Lezoux potter *Paullinus* v (see S3).

Decorated catalogue

The following catalogue lists and identifies the decorated pieces recovered from the site that could be attributed to individual potters or groups of potters. The catalogue is organized in period order, then by context. Each entry gives the excavation context number, form type, production centre, weight, rim EVE if present, diameter, details of the decoration and a date-range.

The letter and number codes used for the non-figured types on the Central Gaulish material, such as B223, C281, etc., are the ones created by Rogers (1974). The figured-types prefixed with 'Os.' are the ones illustrated by Felix Oswald in his *Index of figure-types on terra sigillata* (1936-1937).

The Inventory Numbers (Inv. No.) quoted are taken from *European intake of Roman Samian ceramics.* http://www.rgzm.de/Samian/home/frames.htm

Area C

D1. (Figure 9.1, No. 2) Context (2032) — one rim sherd, 29g, RE=0.16, 160mm, Dr.37 with internal grooves, Montans. The ovolo with a tongue on the right ending into a blob is abraded but might perhaps be one of the ovolos used by Felicio iv (Inv. No.2003191). Trajanic-Hadrianic

D2. (Figure 9.1, No. 9) Context (2222) — one bodysherd, 15g, excoriated surfaces, Dr.37, Lezoux. The decoration is too abraded to be identified. AD 120-200

D3. (Figure 9.1, No. 10) Context (2236) — one bodysherd, 3g, Dr.37, Lezoux. The back legs of a deer or a horse are all that remain, perhaps from Os.1744 or 1822O.

D4. (Figure 9.1, No. 1) Context (2236) — four joining rim sherds including one with the edge of a repair hole, two additional bodysherds including one with a repair hole, 92g, RE=0.18, 200mm, Dr.37, Lezoux. In the style of potter Butrio.

The ovolo (B109) and the wavy border are on Inv. No.0010504, the mask facing right on Inv. Nos.0012824 and 0012996 as is perhaps the mask facing left. The arm of Venus Os.305 is visible, another motif known for Butrio (Inv. No.0012997). AD 115-140

D5. (Figure 9.1, No. 8) Context (2401) — one bodysherd, 11g, transformed into a spindle whorl (SF 52), Dr.37, La Graufesenque. All that remains is a chevron wreath, a type common in the Pompeii Hoard (Atkinson 1914). AD 70-90

D6. (Figure 9.1, No. 7) Context (2417) — one bodysherd, 2g, Dr.37, Lezoux. The ovolo is too partial to identify with any confidence.

Area B

D7. (Figure 9.1, No. 3) Context (3423) — three joining rim sherds, 166g, RE=0.2, 190mm, Dr.37, Lezoux. The ovolo (B107) and several of the animals in the freestyle decoration, panthers Os.1533 and Os.1537 in particular, are reminiscent of the work of Albucius ii but there are several details that do not fit; the roped border, the long striated buds and the leaves. There are stylistic links to Gratus iii who used the goat (Os.1842) and a long striated bud (Inv. No. 0011681) but also Gippus and Servus v-Mac-: the partial small leaves scattered throughout are perhaps from H133 (see Inv. No.0011670 for what might be the leaf with a stamp by Gippus), the ovolo (Inv. No.0011671), the striated bud (Rogers 1999, pl.46, nos. 4 and 6), the deer (Os.1784) and perhaps the dog are on pl.46, no.7. A related ovolo (B105) and the border are on a bowl with a stamp by Servus v-Mac- (Inv. No.0012612) a potter related to Gippus, AD 155-180.

D8. (Figure 9.1, No. 4) Context (3635) — one rim sherd, 27g, RE=0.05, 200mm, and one bodysherd, 6g, with repair hole and deep groove on surface (from rivet?), Dr.37, Lezoux.

Very little decoration remains but the ovolo, border and medallion with possibly the lower part of triton Os.19 suggest this is probably the same bowl as D9 from (3848).

D9. (Figure 9.1, No. 6) (3848) — five joining rim sherds, 64g, RE=0.15, 180mm, Dr.37, Lezoux.

Ovolo B105, beaded border and triton Os.19 in a medallion next to a roped border topped by a rosette. Paternus v is known for all the motifs (Inv. No. 0012078 for the triton and medallion, Inv. No.0012161 for the roped border and rosette and Inv. No.0012176 for the ovolo). AD 150-185

D10. (Figure 9.1, No. 5) Context (4077) — one bodysherd, 4g, Dr.37, Lezoux. Very little decoration remains, the astragalus is perhaps R60, a motif known for a limited number of potters, the blurred rosette at the end of the border would perhaps suggest the work of Mercator iv or Paternus v. The piece is likely to be mid to late Antonine regardless.

Catalogue of Samian potters' stamps and signatures

The following catalogue lists the potters identified in context order. Each entry gives the catalogue number, the excavation context number; potter's name (i, ii, etc., where homonyms are involved); die form; form type, pottery of origin, a reference to published drawing (where available) and a date range.

S1. (Figure 9.1, No. 20) Context (2032) — most probably Sacirus ii, 3a, Dr.31, Lezoux, (Hartley and Dickinson 2011a, 58) AD 150-180

S2. (Figure 9.1, No. 21) Context (2032) — Tiberius ii, 1b or perhaps a slightly worn version (the frame is smaller), Dr.33, Lezoux (Hartley and Dickinson 2012, 56) AD 140-160

S3. (Figure 9.1, No. 11) Context (3034), SF 188— Paullinus v, new die, Dr.33, Lezoux. The shape and letters are close to the ones on die 3a (Hartley and Dickinson 2011b, 99) but with two clear differences, the position of the dot in the A and the presence of a final I. This is likely to be a complete version of die 3a which shows that the apparent ansate end is actually an I (B. Dickinson, pers. comm.). AD 160-200

S4. (Figure 9.1, No. 12) Context (3467), SF 187— Privatus iii, 1a, Dr.33, Lezoux (Hartley and Dickinson 2011b, 266) AD 160-185

S5. (Figure 9.1, No. 13) Context (3623) — Verecundus iii, probably die 1a, Dr.31, Lezoux (Hartley and Dickinson 2012, 195) AD 160-200

S6. (Figure 9.1, No. 14) Context (3848) — this is likely to be Cinnamus ii, 5e, Dr.31R, Lezoux (Hartley and Dickinson 2008, 22) AD 140-180

S7. (Figure 9.1, No. 15) Context (3848) — Reginus iv, 5b, Dr.38, Lezoux, (Hartley and Dickinson 2011b, 346) AD 150-170

S8. (Figure 9.1, No. 16) Context (6145) — Muxtullus, 1a, Dr.18/31R, Lezoux (Hartley and Dickinson 2010, 198) AD 140-175

S9. (Figure 9.1, No. 17) Unstratified —SF 189— Corisillus, 3a, dish (Wa79 or LUDTg), Lezoux (Hartley and Dickinson 2008, 121) AD 150-200

S10. (Figure 9.1, No. 18) Unstratified — Cracissa, 1a, Dr.33, Lezoux (Hartley and Dickinson 2008, 166) AD 130-160

S11. (Figure 9.1, No. 19) Unstratified — Marcellus iii?, very few Lezoux potters used a final S tilted on its side such as this, Marcellus iii, die 10a is one of the two options that fits best. The height of the frame is shorter than the one drawn in Hartley and Dickinson (2009, 67) but the spacing between the V and S and their respective shape fit. The form is a Dr.31 and not a Dr.18/31 as there is a clear high peak on the base, Lezoux. While the potter seems a little early for the form, he occasionally produced Wa79R (ibid) so was still at work in the early Antonine period. AD 140-165

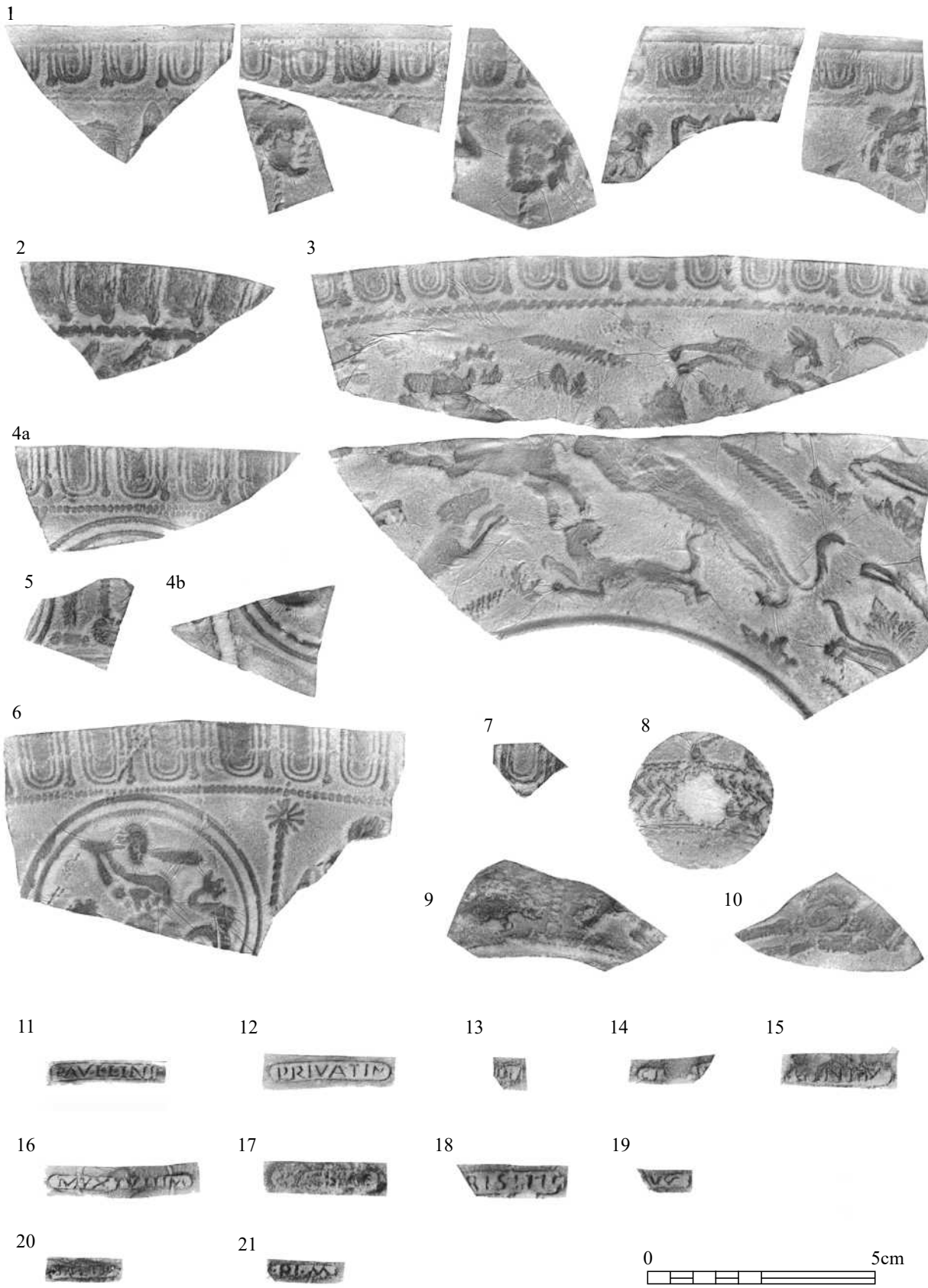


Figure 9.1 Rubbings of decorated and stamped Samian ware sherds described in the catalogue

Appendix 4: Petrographic report of thin-section analyses

By Imogen Wood

Eleven polished thin-section (TS) slides were produced for petrographic analysis, nine of which were selected to characterise the micaceous greywares and identify if possible any similarities/differences between pottery found in the 2nd century and 4th century contexts (TS1-9). Another key aim was to establish the provenance of the clay sources.

The remaining two thin sections (TS 10-11) are from Venus Street in Congresbury, an acknowledged Greyware kiln assemblage, which was used for comparative purposes.

Geology

The underlying geology of the Lyde Green site is part of the Mangotsfield member which is predominantly cross-bedded, lithic arenite, 'Pennant' sandstone in the lower part, and an upper part with thick grey fissile Mercian mudstone beds, interbedded with sandstone and sparse coal seams. Pennant sandstone is distinctively rich in feldspar and mica which weather to red to purple colour.

Methodology

The thin sections were analysed using a polarizing petrographic microscope (Zeiss Axioskop 40), using a 10X ocular lens and a 40X objective lens. The minerals and rock fragments listed below are in order of frequency within the matrix, ranging from *abundant, common, scatter, sparse* to *rare*. The shape of inclusions follows Powers (1953). Hodgson's estimation of inclusion percentage guidelines (1974). Size of inclusions in mm.

Description of microscopic fabrics

Micaceous greywares

TS1 (2417) early (fabric GWA1)
25% percentage inclusions
-Quartz, abundant, angular to sub-angular in shape, uniform size 0.5mm, not present in clay matrix.
-Mica, muscovite, common, lath shaped cleavage flakes, very fine laths in clay matrix.
-Sandstone, common, composed of quartz (sub-angular grains) +muscovite mica in ferruginous cement, inclusion is sub-angular in shape.1.5mm
-Potassium and Plagioclase Feldspar, scatter, sub-angular, same size as quartz, also in clay matrix
-Fe opaque, sparse, well-rounded black/brown, 1.2mm common in clay matrix.
-Chert, sparse, fine grained yellow/grey, sub-angular, same size as quartz.

Comments

A highly processed fine micaceous iron rich silty clay was used to which sandstone derived temper composed of quartz, feldspar, chert and sandstone rock inclusions were added possibly from a riverine source. Clay pellets are absent. The vertical orientation of the planar voids and mica flakes strongly suggests wheel turning production method.

TS2 (2432) early (fabric GWA1)
40% percentage inclusions
-Quartz, abundant, angular to sub-angular, uniform size 0.4mm, smaller pieces abundant in clay matrix
-Mica, muscovite, common, abraded and altered lath shaped cleavage flakes
-Sandstone, common, composed of Quartz + muscovite + feldspar in ferruginous cement, sub-rounded in shape generally larger 1.0 mm, than quartz inclusions
-Fe, opaque, common, back, rounded, same size as quartz, more in clay matrix
-Feldspar plagioclase, sparse, angular to sub-angular, same size as quartz
-Clay pellets, sparse, well-rounded, inclusions of quartz, feldspar and mica visible within. Uniform size 1.5mm.
-Silt stone, rare, well-rounded, fine-grained yellow with quartz veining,

Comments

A processed silty quartz rich micaceous clay, to which graded sandstone derived temper composed of quartz, mica, feldspar and siltstone possibly from a riverine source, also slightly larger pieces of sandstone and clay pellets.

TS3 (2297) early (fabric GWA1)
35% percentage inclusions
-Quartz, abundant, sub-angular, size 0.7mm abundant fine quartz in clay matrix
-Sandstone, common, composed of Quartz + muscovite + feldspar in ferruginous cement, sub-rounded to sub-angular 1.0mm
-Potassium feldspar, rare, angular,
-Mica muscovite, scatter, cleavage flakes, smaller in clay matrix
-Fe, opaque, scatter, rounded smaller than quartz, present in clay matrix.
-Clay pellet, rare, well-rounded 1.5mm
-Siltstone, rare, well-rounded, dense fine banded siltstone, 1.0mm
-Chert, rare, well-rounded dense fine

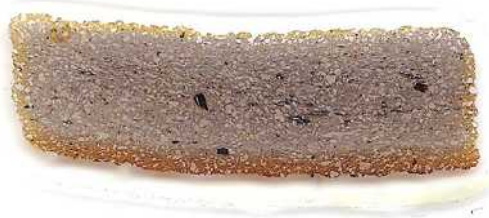
TS1



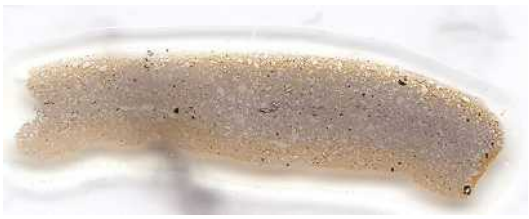
TS2



TS3



TS4



TS5



TS6



TS7



TS8



TS9



TS10



TS11



Figure 9.2 Thin sections of the selected Roman pottery sherds

Comments

Processed silty quartz rich micaceous clay with graded sandstone derived temper composed of quartz, mica, feldspar, chert and siltstone possibly from a riverine source. Slightly larger sandstone pieces and clay pellets. Presence of planar voids vertically aligned suggest wheel turning production method.

TS4 (2003) late (fabric GWA1)
45% percentage inclusions
-Quartz, abundant, angular to sub-angular, broad range of sizes up to 0.5mm clay matrix, But not larger than sandstone fragments
- Sandstone, common, composed of Quartz+muscovite+feldspar in ferruginous cement, rounded generally 0.7mm in size but one 1.2mm in size
-Mica, common, cleavage flakes, fine up to 0.5mm
-Fe, opaque, common, small rounded in clay matrix
-Potassium and Plagioclase feldspar, rare, angular
-Clay pellet, rare, well-rounded, 0.9mm
-Quartz, rare well-rounded size

Comments

This has higher density of inclusions in wider size range compared to TS1, TS2 and TS3. Silty quartz rich micaceous clay. Less processing involved in production, possibly due to better quality clay, the angularity of the Quartz and Feldspar would support this. The rounding and larger size of the sandstone suggests its use as additional temper. There is also a lack of chert and siltstone.

TS5 (5144) late (fabric GWA1)
20% percentage inclusions
-Quartz, abundant, sub-angular, standard size 0.5mm, abundant in clay matrix.
-Sandstone, common, sub-angular, quartz (rounded)+Muscovite and Biotite +feldspar in dark brown cement 1.2mm down to 0.4mm, one tabular large piece in macroscopic view 2.5mm.
-Fe, opaque, common, small rounded in clay matrix
-Mica muscovite (scatter) and biotite (rare), cleavage flakes, fine
-Feldspars, Plagioclase (sparse) and Potassium (rare), angular 0.4mm
-Clay pellets, sparse, well-rounded, boundaries breaking down, 1.0mm
-Chert with fossils, rare, sub-angular, 0.3mm
-Chert, rare, angular, 0.5mm
-Mudstone, iron rich banded, rare, 2mm

Comments

Silty quartz rich micaceous clay which has had a higher level of processing similar to TS1. The overall size and shape of inclusions suggests this is a similar clay source to TS4, with the same addition of larger sandstone pieces as temper. Quantity and size of FE inclusions could suggest waterlogged clay source.

TS6 (2152) late (fabric GWA1)
20% percentage inclusions
-Quartz, abundant, sub-angular, strained quartz, all less than 0.5mm in size, sparse in clay matrix
-Mica, abundant, cleavage flakes 0.9mm down to 0.02
-Feldspars Plagioclase and Potassium, common, sub-angular, same size as quartz
- Sandstone, common, composed of Quartz+biotite+feldspar in ferruginous cement, sub-rounded, 2mm down to 0.5mm.
-Chert, scatter, sub-rounded, dense orange in colour, 0.8mm to 0.5mm
-Fe, opaque, scatter, only in clay matrix.
-Clay pellet, rare, well-rounded 0.5mm

Comments

Highly processed fine silty micaceous clay with very little quartz in clay matrix similar to TS1. Same addition of larger Biotite Sandstone pieces as temper. Orientation of mica in fabric suggest possibly hand built.

TS7 (2080) (fabric GW2)
20% percentage inclusions
-Quartz, strained common, sub-rounded to well-rounded, size between 0.5mm to 0.9mm.
-Clay pellet, scatter, well-rounded, inclusions visible, shrinkage around edge of pellet, highly fired, 0.5mm largest 1.2mm
-Chert, sparse, well-rounded, dense fine grained
-Quartz, polycrystalline, rare, sub-rounded, same size as other Quartz.
-Mica, rare, very fine in matrix only
-Mudstone, rare, tabular with rounded edges, iron rich banded.1.5mm

Comments

Fine silty micaceous processed clay with few inclusions and very fine quartz in clay matrix. Inclusions are standard size and more rounded than the other samples from Lyde Green. Low optical activity in the clay matrix suggesting higher firing temperature. Planar voids suggest wheel production method. This sample is possibly comparable to the TS 10 and TS11 from Venus street.

TS8 (3280) late (fabric GWA2)
35% percentage inclusions
-Quartz, common, sub-angular to sub-rounded 0.5mm and abundant in clay matrix
-Fe, common, opaque, rounded to well-rounded 0.5mm and in clay matrix
-Quartz, scatter, well-rounded 1.2mm down to 0.5mm

-Feldspars Potassium and Plagioclase, sparse, 0.2
-Mica, muscovite, fine cleavage flakes mainly in clay matrix

Comments

Fine silty quartz rich micaceous poorly processed clay with no sandstone temper. Central area of vessel has area of poorly mixed base clay with abundant in fine quartz and FE pieces. The density of quartz in the clay matrix is similar to TS4. Larger well-rounded quartz is possibly sand added to improve poor quality clay (visible on right side).

Non-micaceous greywares

TS9 (3280) late (GW3)
25% percentage inclusions
-Quartz, strained, abundant, angular to sub-angular, generally 0.2mm in size two are 0.5mm, abundant in clay matrix.
-Mica's, muscovite and biotite, cleavage flakes, common, generally large 0.8mm and smaller in clay matrix.
-Sandstone, common, sub-angular, quartz+mica+feldspar dark brown cement. generally 0.2mm in size, one large piece 1.0mm
-Fe, common, opaque, sub-rounded, mainly in clay matrix
-Feldspar, plagioclase, sparse, sub-angular, 0.2mm
-Clay pellet, rare, well-rounded, high fired, 2.0mm
-Chert, rare, sub-angular, dense yellow/orange, 0.5mm

Comments

Silty quartz-rich micaceous clay, processed to remove larger inclusions. Low optical activity suggests higher firing temperature. Density of quartz in clay matrix is similar to that seen in TS4 and TS8. The vertical alignment of mica to the body of the vessel suggests wheel turned production method. A piece of sandstone possible adhered to exterior accidentally.

Venus Street, Congresbury (66-A-76)

TS10: coarser greyware fabric
20% percentage inclusions
-Quartz, common, cracked strained, rounded to well-rounded, 1.0mm to 0.5mm, also rounded and abundant in clay matrix
-Quartz polycrystalline, common, well-rounded, 0.9mm to 0.2mm, also in clay matrix.
-Clay pellet/FE, scatter, well-rounded, size from 0.9mm to 0.2mm
-Feldspar Potassium, rare, well-rounded large 0.5mm
-Mica, rare, very fine cleavage flakes
-Chert, rare, well-rounded, 0.5mm
-FE, rare, well-rounded only in clay matrix.

Comments

Fine silty/sandy quartz rich clay, poorly processed clay with areas of base clay visible (on right side of slide). Low optical activity in the clay matrix suggests high firing temperature. Planar voids indicate wheel-turning method of production. All of the quartz is well-rounded suggesting a sandy base clay, which is not seen in the Lyde Green assemblage. The presence of polycrystalline quartz is an indicator of a different geological origin, possibly the Arden sandstone, part of the Triassic Mercian mudstone group underlying Congresbury. The rare occurrence of feldspar, common in TS1-9 supports this.

TS11 Venus Street, Congresbury finer greyware fabric
15% percentage inclusions
-Mica, scatter, very fine cleavage flakes all in clay matrix
-Clay pellets, scatter, well-rounded shrinkage, inclusions visible.
-Quartz polycrystalline, sparse, well-rounded, 0.7mm, also in clay matrix angular
-Quartz, sparse, well-rounded, 0.6 also in clay matrix
-Chert, rare, well-rounded dense yellow, shrinkage around edges 0.5mm
-Fe, rare, sub-rounded, opaque, in clay matrix

Comments

Very fine silty/sandy clay with few inclusions, highly processed to remove larger inclusions. Low optical activity in clay matrix suggesting high firing temperature. Once again, the polycrystalline quartz and level of rounding in the clay matrix suggests its possible source as the Arden sandstone, part of the Triassic Mercian mudstone group underlying Congresbury.

Results

The petrological analysis of pottery from Lyde Green has revealed an interesting insight into the sourcing, production techniques and firing of the pottery sampled. It has also been able to answer some of the questions outlined in the aims stated above. The characterisation of the fabrics analysed indicate that the samples from the site form one fabric group with a common igneous derived suite of inclusions. The small differences in the size and quantity of the inclusions are the result of differing levels of processing the clay, production methods involved and type of vessel: fine or coarse. As to the provenance, the minerals presents confirm a source local to the site or within the area east of Bristol. The 'Pennant' sandstone interbedded with the mudstone underlying the site is composed of igneous mineral such as quartz, feldspar and micas, which has been bound together with an iron rich cement. Pennant Sandstone is known for its dark red

colour in hand sample, which would fit with the many pieces visible in thin section. A possible source location could be the nearby Shortwood Quarry that provided good quality clay for brick making in the 19th century (Doughty and Ward 1975). Shortwood quarry was originally the site of a Roman road running to the east of Bristol the builders of which may have been aware of this clay. However, compositional analysis of this clay source would be needed to establish this.

There do seem to be some unifying elements within early and late period groups, but there are no significant differences between them.

The quantity of inclusions in the early group TS1 (25%), TS2 (40%) and TS3 (35%) is varied. The later group, apart from TS4 (45%), is rather uniform: TS5 (20%), TS6 (20%), TS7 (20%), TS8 (35%) and TS9 (25%). Obviously, this is only a small sample size, but it could suggest that in the earlier period the clay source was of a poorer quality and required more processing and that later it required less or could equally be related to changing production methods over time. This is a pattern sometimes seen in clay sources used over long periods of time, which is due the variation within the clay deposits at different depths.

In relation to the production processes, the common occurrence of clay pellets seems to be significant. Previously these have been interpreted as grog, but in this case were not added intentionally and most likely the result of dried clay pieces accidently finding their way into fabrics during production. The shrinkage around these pellets confirms their unfired state before inclusion. It is clear that the sandstone tempering material was sieved to achieve a standard size and it was at this point that the clay pellets were accidently added. The planar voids seen in TS7, TS3, TS1 and orientation of mica in TS9 suggest wheel turning, whilst TS6 was coil built which could be related to coarser nature of the vessel.

The two slides TS10 and TS11 from Venus Street Congresbury share a similar igneous derived background but differ in the presence of polycrystalline quartz, which is a feature of the Arden Sandstone formation underlying Congresbury (Milroy 1998, 152). TS10 and TS11 have also been processed to a higher degree with fewer inclusions added as temper and fired to a higher temperature as indicated by the low optical activity in the clay matrix. TS7 is closest possible match based on a single piece of polycrystalline quartz, well-rounded inclusions and the low optical activity, but is not a 100% match.

Appendix 5: Fabric descriptions of ceramic building material

The fabric descriptions for the Ceramic Building Material and mortar are given below. Images of the fabrics are given in Figure 9.3. Each image is a 6mm wide cross section of a fresh break.

Mortar
This is a white to pale yellow mortar with moderate coarse charcoal inclusions and common fine sand.

T01
This is a pale red fabric which is hard with a powdery feel. It has inclusions of moderate grog at up to 1mm and moderate sand at *c.* 0.3mm.

T02
This is a red fabric which is hard with a slightly sandy feel. It has inclusions of moderate grog at 0.3mm moderate white lenses of clay and moderate rounded lime at 0.4mm.

T11
This is a pale red fabric with a grey core which is hard with a sandy feel. It has inclusions of common sub-rounded quartz at 0.3mm and moderated grog at 0.3mm.

T12
This is a hard, red fabric with a sandy feel. It has inclusion of common fine sand at *c.* 0.2 mm and sparse lime at 0.3mm and occasional grog at 0.2mm.

TZ01
This is a glazed pale yellow high fired fabric with a fine fracture and occasional fine red and black iron stone in a fine sandy matrix.

TZ11
This is a yellowish red fabric with a grey core. It is hard with an irregular fracture and a sandy feel. It has inclusions of common to abundant subangular multicoloured quartz at 0.4mm and sparse lime at 0.3mm.

TZ12
This is a pale red fabric which is hard with an irregular fracture and a harsh feel it has inclusions of common quartz at 0.3mm moderate lime at 0.3mm and moderate brown stones at 0.5mm.

TZ21
This is a red fabric which is hard with an irregular fracture and sandy feel. It has inclusions of common angular lime at 0.3mm and moderate quartz at 0.2mm.

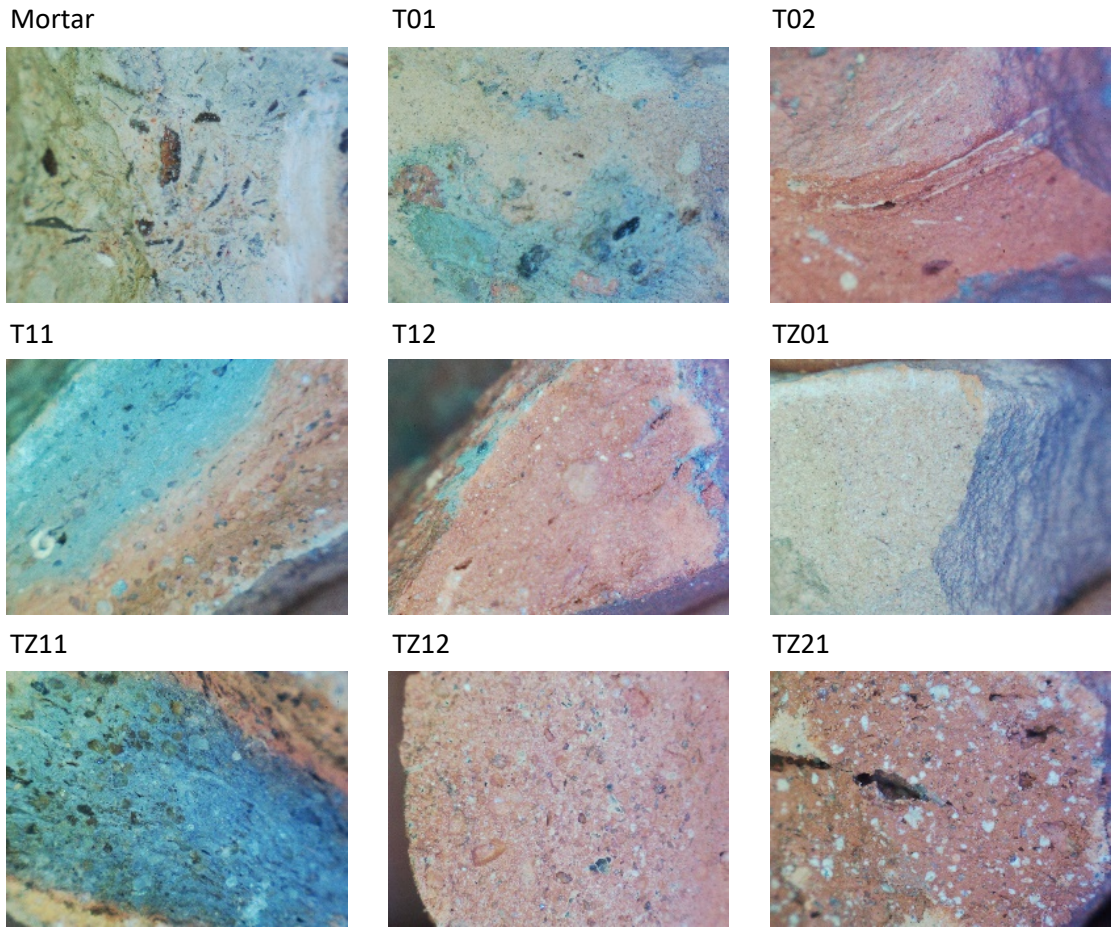


Figure 9.3 Images of ceramic building material fabrics and mortar

Appendix 6: XRF methodology and tables

The instrument is a Bruker S1 Turbosdr hand-held XRF instrument operating at 15kV and 40kV. The technique is non-destructive. A beam of x-rays is generated in the instrument and focused on a fresh fractured surface of the sample, the x-rays interact with the elements present in the sample resulting in the emission of secondary x-rays which are characteristic (in terms of their energy and wavelength) of the elements present in the sample. The energy of the secondary x-rays is measured, and a spectrum generated showing a level of background noise with peaks of the elements present superimposed on the background noise. Slag samples will be analysed for 30 live seconds; the spectrum is stored, and a normalised composition determined using a bespoke computer programme. All elements heavier than magnesium (Mg, Z=12), can be detected. The data is normalised and hence gives data showing relative (semi-quantitative) percentage of detected oxides.

Table 9.2 HH-XRF analyses of the smelting tap slag samples (weight %)

	6188_S1	6188_S2	6188_S3	4124_S4	3582_S5	3740_S6	6188_run	Mean
MgO	4.8	3.4	0.0	0.0	0.0	7.2	0.0	2.2
Al_2O_3	0.7	2.2	10.6	8.0	15.2	6.6	10.3	7.7
SiO_2	7.8	11.6	25.5	28.4	36.3	17.9	30.7	22.6
P_2O_5	1.8	1.8	3.5	2.1	4.0	6.4	2.6	3.2
S	0.4	0.8	0.3	0.3	0.2	0.3	0.2	0.3
K_2O	0.1	0.0	0.6	1.0	1.3	2.5	1.2	1.0
CaO	0.8	0.7	2.7	1.4	2.3	1.7	2.2	1.7
TiO_2	0.0	0.0	0.5	0.4	0.8	0.3	0.5	0.4
V_2O_5	0.0	0.1	0.2	0.2	0.3	0.1	0.2	0.2
Cr_2O_3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MnO	0.1	0.2	0.4	0.3	0.2	0.5	0.3	0.3
FeO	83.4	79.1	55.9	57.8	39.2	56.4	51.5	60.5
CoO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NiO	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
CuO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 9.3 HH-XRF analyses of the smelting slag and furnaces bases (weight %)

	Smelting slag		Furnace Base		
	2222	4124	6188_C1	6188_C2	Mean
MgO	3.2	0.0	0.0	5.6	2.2
Al_2O_3	6.6	9.4	5.3	1.4	5.7
SiO_2	15.7	24.2	11.2	9.5	15.2
P_2O_5	7.3	3.3	2.3	1.6	3.6
S	0.6	0.3	0.4	0.4	0.4
K_2O	0.4	1.6	0.1	0.9	0.8
CaO	4.2	1.4	0.8	0.9	1.8
TiO_2	0.4	0.4	0.1	0.1	0.2
V_2O_5	0.1	0.2	0.1	0.1	0.1
Cr_2O_3	0.0	0.0	0.0	0.0	0.0
MnO	0.2	0.2	0.2	0.1	0.2
FeO	61.2	58.9	79.4	79.3	69.7
CoO	0.0	0.0	0.0	0.0	0.0
NiO	0.0	0.0	0.0	0.0	0.0
CuO	0.0	0.0	0.0	0.0	0.0

Table 9.4 HH-XRF analyses of the hearth bottom samples (weight %)

	2329	2337	Mean
MgO	0.0	0.0	0.0
Al_2O_3	14.6	30.4	22.5
SiO_2	31.3	55.0	43.2
P_2O_5	6.9	3.2	5.1
S	0.6	0.0	0.3
K_2O	1.5	3.1	2.3
CaO	3.7	1.8	2.7
TiO_2	0.7	1.2	1.0
V_2O_5	0.2	0.3	0.2
Cr_2O_3	0.0	0.0	0.0
MnO	1.2	0.5	0.9
FeO	39.3	4.5	21.9
CoO	0.0	0.0	0.0
NiO	0.0	0.0	0.0
CuO	0.0	0.0	0.0

Table 9.5 HH-XRF analyses of the smithing slag samples (weight %)

	2080	2158	2328	2329	2337	Mean
MgO	0.0	0.0	0.0	0.0	0.0	0.0
Al_2O_3	16.0	17.6	16.4	19.9	12.1	16.4
SiO_2	75.7	40.1	31.7	42.0	79.7	53.8
P_2O_5	0.5	3.2	6.5	4.7	0.0	3.0
S	0.0	3.7	0.3	0.2	0.0	0.8
K_2O	1.9	2.0	1.0	3.1	2.0	2.0
CaO	1.3	6.1	2.0	1.4	1.1	2.4
TiO_2	1.0	1.0	0.8	1.0	0.7	0.9
V_2O_5	0.3	0.3	0.3	0.2	0.2	0.2
Cr_2O_3	0.0	0.0	0.0	0.0	0.0	0.0
MnO	0.2	0.2	0.3	0.4	0.1	0.2
FeO	3.1	25.9	40.7	27.1	4.2	20.2
CoO	0.0	0.0	0.0	0.0	0.0	0.0
NiO	0.0	0.0	0.0	0.0	0.0	0.0
CuO	0.0	0.0	0.0	0.0	0.0	0.0

Table 9.6 HH-XRF mean values for the four slag types (weight %)

	Tap Slag	Smelting Slags	Hearth Bottom	Smithing Slag Lumps
MgO	2.2	2.2	0.0	0.0
Al_2O_3	7.7	5.7	22.5	16.4
SiO_2	22.6	15.2	43.2	53.8
P_2O_5	3.2	3.6	5.1	3.0
S	0.3	0.4	0.3	0.8
K_2O	1.0	0.8	2.3	2.0
CaO	1.7	1.8	2.7	2.4
TiO_2	0.4	0.2	1.0	0.9
V_2O_5	0.2	0.1	0.2	0.2
Cr_2O_3	0.0	0.0	0.0	0.0
MnO	0.3	0.2	0.9	0.2
FeO	60.5	69.7	21.9	20.2
CoO	0.0	0.0	0.0	0.0
NiO	0.0	0.0	0.0	0.0
CuO	0.0	0.0	0.0	0.0

Table 9.7 Comparison of the mean values of the HH-XRF analyses of the tap slags and furnace bottoms from the Saxon site and the tap slags and smelting slags from the Villa site (weight %)

	Saxon Industrial Site		Villa Site	
	Tap Slag	Furnace Base	Tap Slag	Smelting Slags
MgO	2.7	1.4	2.2	2.2
Al_2O_3	2.1	5.2	7.7	5.7
SiO_2	14.6	25.6	22.6	15.2
P_2O_5	1.5	1.8	3.2	3.6
S	0.4	0.5	0.3	0.4
K_2O	0.6	0.4	1.0	0.8
CaO	1.1	1.1	1.7	1.8
TiO_2	0.1	0.2	0.4	0.2
V_2O_5	0.1	0.2	0.2	0.1
Cr_2O_3	0.0	0.0	0.0	0.0
MnO	0.1	0.2	0.3	0.2
FeO	76.7	63.5	60.5	69.7
CoO	0.0	0.0	0.0	0.0
NiO	0.0	0.0	0.0	0.0
CuO	0.0	0.0	0.0	0.0

Appendix 7: Methodology for analysis of the human remains

This appendix provides details of the methods of recovery and analysis of human bone from the cremation pits discovered across the excavation site and the disarticulated neonatal bones found in association with structure {4213}.

Neonatal bones

The non-adult bones from context (3203) were lifted on-site by excavators and were processed (wet-washed) in the WA post-excavation finds department upon their arrival at the office. The human remains were then dried in a stable, humidity-controlled drying environment.

The remains were subjected to a detailed skeletal assessment and were recorded using standard forms taken from Schaefer *et al.* (2009: 357 & 360) The degree of erosion to the bone was recorded using McKinley's grading system (McKinley 2004: 16, Fig. 7.1-7). The remains, once quantified, were assessed and an MNI (minimum number of individuals) number was provided. Biological sex determination was not possible because of the age of the remains and rapid osteon re-modelling. For age determination, limb bones were measured using digital callipers and compared against shaft metrics available in Schaefer *et al.* (2009). Regression equations using maximum limb bone lengths were also used for aging the remains using Scheuer *et al.* (1980) (In: Scheuer & Black, 2000). Stages of epiphyseal fusion were observed and recorded using Scheuer and Black (2000; 2004). Pathologies and abnormalities were noted and recorded using Roberts & Manchester (2010), Mays (2010), White, Black & Folkens (2012) and (Waldron (2009).

Cremation pit deposits

The deposit from each cremation pit was block-lifted on-site and transported for further investigation within a post-excavation setting. Where it was apparent that a pit or feature contained multiple burial urn deposits, these were block-lifted separately. Once in the post-excavation department, blocks were then excavated in quadrants in 2-3cm spits and recorded by specialists, including a detailed photographic record digital record of each spit.

Some possible cremation deposits were un-urned and were taken as environmental samples on-site, where they were processed via Siraf flotation and sieved using 6.3mm, 4mm, 2mm & 1mm fractions.

Guidelines outlined by McKinley (2004: 9 – 13) were followed for the excavation of the cremation urns and the compiling of a skeletal inventory for human cremated bone. The contents of each cremation urn were excavated by quadrants and in 3cm spits. Finds were bagged by spit and type of find. Soil from each spit was, separately and gently wet sieved onto a 0.25mm mesh. Each residue was hand-collected and washed, passing through 10mm and 4mm meshes before being collected on a 0.5mm mesh. Cremated material was hand-collected from the 10 mm and 4mm mesh. The remaining fraction was further divided into 2mm and 1mm fragments, retained with any visible extraneous material removed, and weighed

For each urn, mass measurements were obtained for the sieved fractions as well as a value for the total weight of cremated materials. Bone was sorted into human and non-human where possible and identifiable human bone fragments were sorted into four skeletal areas – skull, axial skeleton, upper limb and lower limb (*Ibid*). Any duplication of skeletal elements was also recorded to determine the minimum number of individuals (MNI) represented (*Ibid*). Identification and recording of skeletal elements was carried out with reference to Schmidt & Symes (2008) and White & Folkens (2000).

Bone colour, any unusual warping resulting from dehydration and, the presence of any pyre goods and pyre debris was also observed and recorded (*Ibid).* This was undertaken using guidance published by McKinley (2017, 14-19) for CIfA.

Sex determination, where possible, was recorded using standards by Van Vark (1974; 1975), Wahl (1982), and Haas, Buikstra and Ubelaker *et al.* (1994). Age determination, where possible, was recorded using tooth development charts in Brothwell (1981), Ubelaker (1989) and Haas, Buikstra and Ubelaker *et al.* (1994). Age determination for non-adult human remains was established using epiphyseal fusion stages published in Scheuer and Black (2004; 2000), and Schaefer, Black & Scheuer (2009) and Scheuer and Black (2004; 2000), were recorded using standard forms from Schaefer *et al.* (2009: 357 & 360). The degree of erosion to the bone was recorded using a standard grading system (McKinley 2004: 16, Fig. 7.1-7). As the remains were sub-adult, biological sex estimation was not possible. For age-at-death estimation, limb bones were measured using digital callipers and compared against shaft metrics available in Schaefer *et al.* (2009). Maximum limb bone length measurements were also input into regression equations for age estimation, devised by Scheuer *et al.* (1980) (In: Scheuer & Black, 2000). Both of these methods gave consistent results. Stages of epiphyseal fusion were recorded using Scheuer and Black (2000; 2004). Any pathologies and abnormalities were recorded using Roberts & Manchester (2010), Mays (2010), Waldron (2009) and Ortner (2003). Non-metric traits would have been recorded using Mann, Hunt and Lozanoff (2016).

Appendix 8: Roman pottery illustration catalogue

No.	Figure	Fabric	Description	Context	Area	Feature
1	6.3	LI	Jar, neck-less/bead rim.	1536	D	Encl. 1005
2	6.3	GR	Jar, neckless/upright rim.	1536	D	Encl. 1005
3	6.3	SVW REo	Jar, ovoid	1536	D	Encl. 1005
4	6.3	MAL LI	Jar, neckless/everted rim	1273	D	Encl. 1005
5	6.3	SVW REo	Jar, neckless, bead rim	1272	D	Encl. 1005
6	6.3	BL2	Bowl, necked/shouldered	1273	D	Encl. 1005
7	6.3	BL2	Bowl, necked/shouldered	1138	D	Encl. 1005
8	6.3	GR4	Jar, necked	1138	D	Encl. 1005
9	6.3	GR1	Platter	2072	C	Encl. 2050
10	6.3	SAV GT	Jar, necked	5135, 5170	B	Ditch 6620
11	6.3	SVW REo	Jar, round shoulder	2042	C	Ditch 2006
12	6.3	SVW GR1	Jar, neckless	1393	D	Ditch 1391
13	6.3	SVW GR2	Jar, necked	1149	D	Ditch 1005
14	6.3	SVW GR2	Jar, necked	2243	C	Ditch 2006
15	6.3	SVW GR2	Jar, necked	1534	D	Encl. 1005
16	6.3	SVW GR2	Jar, neckless	1534	D	Encl. 1005
17	6.3	BL2	Bowl, necked/shouldered	1534	D	Encl. 1005
18	6.3	DOR BB1	Jar/'cooking pot'	1534	D	Encl. 1005
19	6.3	LI	Jar, neckless	1348	D	Ring-gully 1296
20	6.3	SVW GR1	Jar, neckless	1348	D	Ring-gully 1296
21	6.3	DOR BB1	Dish, flat rim	1348	D	Ring-gully 1296
22	6.3	DOR BB1	Jar/'cooking pot'	1348	D	Ring-gully 1296
23	6.4	BS1	Jar, globular	2306	C	Ditch 2304
24	6.4	GW2	Jar, necked	1390	D	Ditch 1388
25	6.4	GW2	Jar, cavetto neck	2417	C	Ditch 2444
26	6.4	GW2	Jar, angular shoulder	1533	D	Ditch 1493
27	6.4	GW2	Jar, handled//flagon	2417	C	Ditch 2444
28	6.4	GW4	Jar, necked (handled)	3078	B	Ditch 3065
29	6.4	GW2	Jar (BB1 copy)	2236	C	Ditch 2155
30	6.4	BSA1	Jar, cavetto neck	2236	C	Ditch 2155
31	6.4	BSA3	Dish, flat rim	1350	D	Encl. 1005
32	6.4	GWA1	Dish, flat rim	3569	B	Drain 3564
33	6.4	BL2	Bowl, carinated	1448	D	Ditch 1447
34	6.4	GWfm	Platter/dish	2417	C	Ditch 2444
35	6.4	BL1	Dish (Dr.36 copy)	2297	C	Ditch 2296
36	6.4	GWA1o	Bowl, necked/shouldered	2019	C	Pit 2018
37	6.4	GWA1	Bowl, flat/grooved rim	2080	C	Ditch 2050
38	6.5	GW2	Tankard	2303	C	Ditch 2296
39	6.5	GW2	Tankard	3202	B	Layer 3202
40	6.5	BS1m	Beaker, ovoid	3079	B	Ditch 3065
41	6.5	SVW OX	Bowl, flat rim	2417	C	Ditch 2444

No.	Figure	Fabric	Description	Context	Area	Feature
42	6.5	SVW OX	Dish, moulded rim	4130	B	subsoil 4130
43	6.5	OX4	Jar/beaker, globular	2236	C	Ditch 2155
44	6.5	OX3	Jar, miniature	2236	C	Ditch 2155
45	6.5	SVW OX	Dish/bowl, bead/flange (Webster I)	2303	C	Ditch 2296
46	6.5	OX CC	Beaker, bag-shaped	2303	C	Ditch 2296
47	6.5	CCrc	Beaker, bag-shaped/roughcasted	2303	C	Ditch 2296
48	6.5	OX WS	Flagon, ring-neck	2452	C	Layer 2452
49	6.5	SOW WS	Flagon, bead/flat rim	1490	D	Pit 1489
50	6.5	SOW WSm	Mortarium (cf. Seager-Smith 2001, 223-224; Rigby 1982, Fig. 43, no. 48	1490	D	Pit 1489
51	6.5	SOW WSm	Mortarium, bead/flanged rim	2297	C	Ditch 2296
52	6.5	SOW WSm	Mortarium, (cf. *ibid*. Fig. 43, no. 47)	2222	C	Ditch 2223
53	6.5	SOW WSm	Mortarium (cf. *ibid*. Fig. 43, no. 51)	2215	C	Ditch 2050
54	6.5	RHI WH	Mortarium (cf. Hartley 1991, 206-207)	3907	B	Layer 3907
55	6.6	GWA1	Jar, cavetto neck	2342	C	Ditch 2155
56	6.6	BSA2	Bowl, cavetto neck	3423	B	Ditch 3424
57	6.6	BSA2	Dish, plain rim	2152	C	Ditch 2050
58	6.6	BSA1	Dish, groove to body ('Surrey' type)	5125	B	Ditch 5127
59	6.6	GW6	Bowl, curved-sided	1490	D	Pit 1489
60	6.6	GW3	Jar, cavetto neck	4026	B	Cut 4025
61	6.6	ALH RE	Jar, squared rim	2158, 2342	C	Ditch 2155
62	6.6	DOR BB1	Dish, plain rim	3280	B	Ditch 3216
63	6.7	DOR BB1	Oval (fish) dish	2342	C	Ditch 2155
64	6.7	DOR BB1	Dish, flanged/dish plain rim	3270	B	Pit 3222
65	6.7	DOR BB1	Small jar/beaker	3270	B	Pit 3222
66	6.7	GW1	Bowl, flanged	3270	B	Pit 3222
67	6.7	GW1	Jar/bottle, collared rim	4006	B	Cut 4006
68	6.7	GW3	Jar, necked (frilled rim)	3806	B	Brd. soil 3806
69	6.7	OXF RS	Beaker; as Young (1977) C22-C23	3368	B	Cut 3370
70	6.7	OXF RS	Beaker; as Young (1977) C29?	3741	B	Layer 3741
71	6.7	OXF RS	Beaker; as Young (1977) C27	3364	B	Ditch 3362
72	6.7	OXF RS	Bottle; as Young (1977) C1	3270	B	Pit 3222
73	6.7	OXF RS	Flagon; as Young (1977) C8	3755	B	Ditch 3638
74	6.7	OXF RS	Bowl; as Young (1977) C71?	3881	B	Layer 3881
75	6.7	OXF RS	Bowl; as Young (1977) C81.5	5143	B	Ditch 5129
76	6.7	OXF RS	Bowl; as Young (1977) C84/85	4006	B	Cut 4006
77	6.7	OXF PA	Jar/bowl; as Young (1977) C84/85	6176	B	Layer 6176
78	6.7	OXF WHm	Mortarium; as Young (1977) M17/M18	3358	B	Ditch 3357
79	6.7	OXF WHm	Mortarium; as Young (1977) M17/M18	3740	B	Layer 3740
80	6.7	OXF WHm	Mortarium; as Young (1977) M22	3342	B	Ditch 3344
81	6.7	OXF WSm	Mortarium; as Young (1977) M22	3806	B	Brd. soil 3806
82	6.7	OXF RSm	Mortarium; as Young (1977) C97	3584	B	Layer 3584
83	6.2	DOR BB1	Jar/'cooking pot'; as Holbrook and Bidwell (1991), Type 12	3334	B	Crem. no. 4
84	6.2	DOR BB1	Jar/'cooking pot'; as Holbrook and Bidwell (1991), Type 12	3327	B	Crem. no. 5

No.	Figure	Fabric	Description	Context	Area	Feature
85	6.2	DOR BB1	Jar/'cooking pot'; as Holbrook andBidwell (1991), Type 15-17	3337	B	Crem. no. 3
86	6.2	DOR BB1	Jar/'cooking pot'; as Holbrook and Bidwell (1991), Type 15-17	3209	B	Crem. no. 7
87	6.2	GW2	Jar, everted rim	3265	B	Crem. no. 6
88	6.2	GW2	Flagon	3265	B	Crem. no. 6
89	6.2	GWA1	Jar, necked	3330	B	Crem. no. 1

Bibliography

Abbreviations

AJ	The Archaeological Journal
Am. J. Phys. Anthropol.	American Journal of Physical Anthropology
Ann. Hum. Biol.	Annals of Human Biology
AntJ	Antiquaries Journal
BIAS	Bristol Industrial Archaeology Society Journal
JAA	Journal of Anthropological Archaeology
JALC	Journal of Archaeology in the Low Countries
JRMES	Journal of Roman Military Equipment Studies
JRA	Journal of Roman Archaeology
JRPS	Journal of Roman Pottery Studies
JRS	Journal of Roman Studies
OJA	Oxford Journal of Archaeology
Proc. UBSS	Proceedings of the University of Bristol Spelaeological Society
RIC III	Mattingly, H. and Sydenham, E. A. 1986. *The Roman Imperial Coinage. Volume III. Antoninus Pius to Commodus* (London).
RIC IV	Mattingly, H., Sydenham, E. A. and Sutherland, C. H. V. 1968. *The Roman Imperial Coinage. Volume IV. Part 1. Pertinax to Geta AD 193-212* (London).
RIC V^{1}	Mattingly, H., Sydenham, E. A. and Webb, P. H. 1927. *The Roman imperial coinage. Volume V. Part I, Valerian to Florian* (London).
RIC V^{2}	Mattingly, H., Sydenham, E. A. and Webb, P. H. 1933. *The Roman imperial coinage. Volume V. Part II, Probus to Diocletian* (London).
RIC VI	Sutherland, C. H. V. and Carson, R. A. G. 1967. *The Roman imperial coinage. Volume VI. From Diocletian's reform (A.D. 294) to the death of Maximinus (A.D. 313)* (London).
RIC VII	Bruun, P., Sutherland, C. H. V. and Carson, R. A. G. 1966. *The Roman imperial coinage. Volume VII. Constantine and Licinius, A.D. 313-337* (London).
RIC VIII	Kent, J., Sutherland, C. H. V. and Carson, R. A. G. 1981. *The Roman imperial coinage. Volume VIII. The family of Constantine I, A.D. 337-364* (London).
TBGAS	Transactions of the Bristol and Gloucestershire Archaeological Society
WANHM	Wiltshire Archaeological and Natural History Magazine

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Lyde Green Roman Villa, Emersons Green, South Gloucestershire was excavated between mid-2012 and mid-2013 along with its surroundings and antecedent settlement. The excavations took place as part of the Emersons Green East Development Area, funded through the mechanism of commercial archaeology by Gardiner & Theobald LLP. The results of the stratigraphic analysis are given here along with specialist reports on the human remains, pottery (including thin sections), ceramic building material, small finds, coinage and iron-working waste. Six open-area excavations allowed the archaeologists the rare opportunity to trace a substantial part of the site's layout. Three ancillary buildings within the villa compound, including a bathhouse, were excavated. Evidence of advanced water management was uncovered in the form of lead piping, ceramic drain tiles and an enigmatic stone structure built into a canalised spring line. The villa's economy included stock raising, crop processing and iron and textile production. The settlement appears to have originated in the mid-1st century AD, or slightly earlier.



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