Grange Paddocks Leisure Centre

Post-Excavation Assessment and Updated Project Design

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Grange Paddocks Leisure Centre

Post-Excavation Assessment and Updated Project Design

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Summary

Between the 7th October and the 18th December 2019, Oxford Archaeology East undertook an archaeological excavation (0.35ha) on the proposed site of a new leisure centre at Grange Paddocks, Bishop's Stortford. The project was commissioned by RPS on behalf of East Herts District Council.

Previous investigations within the vicinity of the excavated area, located at the intersection of the River Stort and Roman Stane Street, indicated the presence of a Late Iron Age/Early Roman settlement with continued occupation into the later Roman period.

The excavation uncovered an exceptionally rich post-conquest Roman settlement, dating primarily to the 1st-3rd centuries AD, with multiple phases of buildings and enclosures respecting the alignment of the road to the north of the site. A revised view of the cropmark data would indicate that the Roman town of Bishop's Stortford was more substantial than previously thought, extending westwards from the known settlement at Legions Way right up to the river crossing. The excavation exposed a portion of the western end of this roadside settlement and preliminary results indicate that this portion of the town may have had a commercial/economic focus with artefactual evidence recovered that supports the suggestion of trade occurring on the site, as well as potentially the provision of services such as smithing and hospitality.

While more than one high status Roman building was clearly present in the immediate vicinity of the excavated area, as evidenced by the quantities and varieties of flue and pila tile, the buildings within the excavation area were primarily of timber construction, albeit with potentially lime-washed wattle panels and tiled roofs. Of particular note is the presence of at least four large Roman sunken-featured buildings (SFBs) from which nine of the ten neonate burials found at the site were recovered. These buildings provide an important addition to this feature type of such an early date, being more usually associated with Anglo-Saxon activity.

Extremely large finds assemblages (in particular metalwork and pottery) were recovered from the site which indicate a variety of activities taking place within the settlement and highlight the fact that, as a roadside settlement on a major route such as Stane Street, the site had access to a diverse trade network. It is also quite possible that the River Stort was utilised for trade and transport during the Roman period and that the settlement here served as some form of communications hub.

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1 INTRODUCTION

1.1 Background

1.1.1 Between the 7th October and the 18th December 2019 Oxford Archaeology East undertook an archaeological excavation (0.35ha) on the proposed site of a new leisure centre at Grange Paddocks, Bishop's Stortford (TL 4893 2199; Fig. 1). The project was commissioned by RPS Consulting on behalf of East Herts District Council. Previous investigations of the site had indicated the presence of a Late Iron Age/Early Roman settlement with continued occupation into the later Roman period (Hardcastle 2019).

1.1.2 This assessment has been conducted in accordance with the principles identified in Historic England's guidance documents *Management of Research Projects in the Historic Environment*, specifically *The MoRPHE Project Manager's Guide (2006) and PPN3 Archaeological Excavation* (2008).

1.2 Geology and topography

1.2.1 The underlying bedrock geology of the area is mapped as chalk of the Lewes Nodular Chalk Formation and Seaford Chalk Formation, overlain by river terrace deposits of sand, gravel and alluvium, with loamy and clayey floodplain soils.

1.2.2 The topography of the site is fairly level, rising gently from 58 and 59m above Ordnance Datum (OD) in the northern and southern areas respectively, to 60m OD in the central area.

1.2.3 The site comprises an irregular plot of land, *c.* 14.26ha in extent, located in the north of Bishop's Stortford. It consists of buildings and playing fields in the north, with associated infrastructure and woodland in the southern portion of the site The site is bounded to the north and west by the River Stort, to the east by a railway line and to the south by woodland.

1.3 Archaeological background

1.3.1 The historical and archaeological background of the site has been detailed within a desk-based assessment produced by Cotswold Archaeology (Pratt, 2018), which details recent archaeological investigations within the immediate environs of the site. The following section is summarised from this source. Hertfordshire Historic Environment Records (HHER) entries relating to the Roman town are shown on Figure 1 and investigations within the site's environs are shown on Figure 2.

Prehistoric

1.3.2 No evidence for prehistoric activity has previously been identified within the site. Located approximately 1km to the north, Early Neolithic, Bronze Age and Iron Age activity was identified, including a ring ditch with central post, trackway and associated pits, post-holes, indicating settlement activity was located on to the north of the River Stort on south-facing slopes overlooking the river (Bush 2013). Located *c.* 2km to the

west of the site, a Late Iron Age ring ditch with a burial or shrine at its centre was recorded (Jackson 2012, Bush 2013).

Roman

1.3.3 Several archaeological investigations within the site recorded evidence for Roman activity. These revealed potential burials, a cobbled surface forming a road and multi-phase settlement activity.

1.3.4 In 1978 the Bishop's Stortford Local History Society and the East Hertfordshire Archaeological Society conducted an excavation during construction at Grange Paddocks Leisure Centre (Crank, McDonald and Murray 2001, HHER 6505). This revealed a small concentration of pits and post-holes relating to multiple phases of activity in the 1st to 4th century AD, with a potential hiatus of activity in the 2nd century.

1.3.5 Further archaeological evaluation was carried out at Grange Paddocks Leisure Centre in 2001. This revealed multiple pits and ditches with associated field systems (Crank *et al.* 2001, HHER 12051). Four inhumations, indicating the potential for a cemetery, were located directly to the north-east of the existing buildings on site.

1.3.6 Further archaeological works directly associated with the current leisure centre revealed comparable archaeology of Roman date (Cavanagh 2009, McElligott 2010). In addition to pits and ditches, a further inhumation was identified with a location for a potential cemetery being suggested directly to the north of the leisure centre. The presence of large intercutting pits implies the potential for gravel extraction, while the potential for refuse disposal to the south of the leisure centre indicates that the activity located in this area lay away from the main settlement *foci.*

1.3.7 Aerial photography (Google 2019) indicated the potential for significant archaeological remains within the site, with numerous ditches forming enclosures clearly visible (an interpretation is shown on Fig. 2). Two large linear features running east/west potentially relate to the projected alignment of a Roman Road known as Stane Street. Archaeological excavations of the road were undertaken at the junction of Parsonage Lane and Stansted Road in 1949, to the west of the railway line within the south-eastern part of the site between 1965 and 1966 (HHER 1435, 2139), at Elliott's Yard (Wright 1982, HHER 6520), and at 133 Stansted Road (Doel 1999).

1.3.8 Considerable evidence of Romano-British settlement and activity was recorded around Stansted Road/Legions Way/Cannons Close *c.* 300m to the east of the site (HHER 9868, HHER 13755, HHER 513).

1.3.9 Excavations at 133 Stansted Road revealed metalled surfaces laid above a brick earth foundation, apparent roadside ditches within which a single inhumation burial was interred, as well as further ditches, post-holes and refuse pits dating to the 2nd century AD (Doel 1999, 3– 7; Fell 2002). It has been suggested that the section of Stansted Road that joins Parsonage Lane (*i.e.* Stane Street) traces the route of another Roman road that led to Harlow, but it is unclear whether there is any archaeological evidence to support this suggestion.

1.3.10 Excavations at the former Waggon and Horses Public House at 135 Stansted Road, on the north side of Legions Way, revealed six cremations dated to the 1st to mid-2nd centuries AD and a quarry pit and a series of north/south and east/west oriented ditches broadly dated to the 3rd and 4th centuries AD (Boyer 2012, HHER13755).

Anglo-Saxon/Medieval

1.3.11 There is no known Anglo-Saxon or medieval activity within the site and limited archaeological evidence within the wider area. Located *c.* 700m north-north-east of the site, at Hazel End, a ditch terminus or pit containing sherds of late-6th and 7th-century pottery was identified during evaluation (OA 2013a). There were probably multiple dispersed sites of Anglo-Saxon occupation, although the main settlement was focussed on a new crossing of the River Stort to the south of Stane Street, *c*. 340m south of the site.

1.3.12 By 1086, Bishop's Stortford was quite a large settlement of 29 households with land for 10 plough lands, woodland for 300 pigs, and two mills (University of Hull 2018). The medieval town core comprises the crossroads of North Street, South Street, Windhill and High Street, which are first documented in the 13th century.

Post-Medieval

1.3.13 Historic mapping from the 1839 Tithe Map indicated an agricultural land use within the site. Areas of scrubland woodland were visible from the 1940s, with playing fields first established in 1965. By 1989, football fields had been established across the whole site.

Archaeological Evaluation 2019

1.3.14 An archaeological evaluation of the site was undertaken by Cotswold Archaeological Trust (Hardcastle 2019), but unfortunately did not accurately characterise the nature and extent of the archaeological remains present on the site (specifically in relation to the presence of dark earth type deposits and the substantial quantity of finds). The results of the evaluation are summarised here, with further details and their implications being discussed further in Section 6.1 of the Updated Project Design below.

1.3.15 The evaluation results broadly correlated with parch marks identified from satellite imagery, with the evaluation identifying ditches corresponding with the rectangular enclosures. The identified features were attributed to four main periods: Mesolithic to Neolithic, late prehistoric, Late Iron Age/Early Roman and Late Roman.

1.3.16 The earliest identified activity on the site comprised a pit and ditch containing flint dating to the Mesolithic and Neolithic periods. Residual pottery, dating to the Late Bronze Age to Early Iron Age, was recovered from later ditches, indicating the potential for activity of this period within the site.

1.3.17 The earliest identified features comprised ditches forming elements of rectangular enclosures, with activity beginning in the Late Iron Age/Early Roman period with occupation continuing into the later Roman period.

1.3.18 Previous archaeological work in the area indicated the potential for a *hiatus* in activity during the Late Roman period. This was not evidenced by the results of the evaluation which demonstrated continued occupation into the later Roman period, albeit on a reduced scale.

1.4 Original research aims and objectives

1.4.1 The overall aim of the investigation was to preserve by record the archaeological evidence contained within the footprint of the development area, prior to damage by development, and investigate the origins, date, development, phasing, spatial organisation, character, function, status, and significance of the remains revealed, and place these in their local, regional and national archaeological context.

1.4.2 Based on the results of the evaluation more specific aims and research questions were formulated:

- Establish whether Mesolithic/Neolithic occupation took place on the site or whether these features were isolated occurrences
- Establish the limits and nature of the Late Iron Age/Early Roman settlement
- Seek to establish any zonation within the settlement
- Explore the decline in Roman activity from the 3rd century onwards
- Attempt to date the end of settlement activity

1.4.3 Following the completion of the fieldwork, these research aims have been revised and redefined (see section 6 below), to ensure that they contribute to the goals of the Regional Research Frameworks relevant to the area.

1.5 Fieldwork methodology

1.5.1 All works were carried out in accordance with the Written Scheme of Investigation approved by Hertfordshire Historic Environment Team prior to commencement of works on site and undertaken in accordance with the Chartered Institute for Archaeologists' (CIfA 2014a) Standard and guidance for archaeological excavation, local and national planning policies.

1.5.2 All machine excavation was carried out by a 360 type excavator using a 2m wide ditching bucket and was monitored at all times by a suitably qualified and experienced archaeologist. All archaeological features and deposits were recorded using OA East's *pro forma* sheets. Sections were drawn at appropriate scales. Site photographs were taken of all features using a DSLR camera.

1.5.3 The northern part of site required two phases of machine excavation, as finds-rich dark deposits were encountered with further features sealed beneath. These layers were investigated and sampled prior to mechanical removal (Plate 2). Further finds collection and metal detecting took place throughout this process and the excavator was able to reach these deposits from a position beyond the limit of the excavation area, thereby avoiding tracking onto the site.

1.5.4 Site survey was conducted using a Leica GS08 GPS system and photogrammetry using a pole cam and drone.

1.5.5 Bulk samples were taken from a range of features within the excavated area and processed at OA East's processing facility at Bourn.

1.5.6 After the main phase of excavation finished, intermittent monitoring was required during the ongoing construction of the new leisure centre. This mainly comprised the monitoring of stripping for a haul road, instalment of drainage and the excavation of an attenuation tank. Where features or archaeological deposits were encountered, investigation and small areas of further excavation were required.

1.6 Project scope

1.6.1 This report deals with the 2019 excavation undertaken by OA East and subsequent monitoring works up to January 2021. The previous phase of archaeological excavation on the site (CA 2019) will be referred to during the assessment where appropriate and the trench plans have been incorporated into the site figures.

2 FACTUAL DATA: STRATIGRAPHY

2.1 General

2.1.1 The following stratigraphic records were created:

Record type	Number
Context record	1496
Sections	351
Plans	11
Environmental samples	60
Small Finds	747
Photographs	1026

Table 1: Records Inventory

2.1.2 The preliminary phasing presented below is based on stratigraphic relationships and spatial associations, combined with dating evidence provided by stratified artefacts.

2.1.3 Summary descriptions of the feature groups identified are given in this section with a full context inventory listing all features provided in Appendix A. Notable artefact assemblages and environmental results are highlighted in the text, supplemented by comprehensive finds quantification tables by feature group for each phase.

2.1.4 The smallest cut number from the excavation phase of works has been used as the group number for each feature group and these appear on the phased plans (Figs 3.1-6). These phases will be further refined and updated at the analysis stage. Individual cut numbers also appear on the phase plans if they are the only feature within their group or if they are referred to directly in the text below.

2.1.5 Six phases of Romano British activity have been identified:

- Phase 1: Mid 1st to 2nd century AD (Fig. 3.1)
- Phase 2: 2nd century AD (Fig. 3.2)
- Phase 3: 2nd to mid 3rd century AD (Fig. 3.3)
- Phase 4: 3rd century AD (Fig. 3.4)
- Phase 5: 3rd to mid 4th century AD (Fig. 3.5)
- Phase 6: 4th century AD (Fig. 3.6)

Settlement organisation

2.1.6 The Romano-British features recorded represent a small portion of a much larger roadside settlement, as evidenced by previous work in the area and indicated by clear cropmark evidence (Fig. 2). These cropmarks have been ground-truthed by this excavation and shown to be an exceptionally accurate indication of the preserved archaeology on the site. This part of the Roman settlement appears to have been organised into a system of roadside compounds with paths and tracks running perpendicular to the road, and between the enclosures. Other trackways running parallel to the main road are also present, forming a grid-like layout to the settlement.

2.1.7 It is currently assumed that many of the enclosures set further back from the road may have served as fields and paddocks, whilst some of the immediate roadside areas (in particular the ones closest to the river) might be linked to trade or have other commercial functions such as hospitality or the provision of services. The tracks running parallel to the main road may also have extended to the River Stort, providing access to the river at multiple points along its length. While this system appears to be by no means static, with reorganisation and sub-divisions of enclosures occurring through the life of the settlement, many of the features revealed by the excavation can be separated into four distinct areas of activity or 'plots' which are used to help describe the archaeology's position on the site and the site's narrative. Plots 1-3 represent a series of enclosures that respected Stane Street, and a further area of activity has been designated Plot 4, which is located to the south of the roadside plots. These plots were modified throughout the Roman period, but the general layout remained broadly consistent during the three main phases of activity (Phases 1-3). Nearly the full extent of Plot 2 was exposed during the excavation, with the other plots being only partially exposed (yet evident from cropmarks).

2.2 Phase 1: Mid 1st to 2nd century AD

Introduction

2.2.1 Whilst residual material implies some low level prehistoric activity, the first phase of the Roman settlement (Fig. 3.1) appears to have coincided with the Roman reworking of this section of Stane Street, an existing earlier route (this straightening is considered to have taken place by AD 50 and investigated by previous work to the east; Doel 1999). The remains resemble a typical roadside settlement with a system of rectilinear enclosures set out along the side of the road. The paths which evidently ran between the various plots during subsequent phases were not evident during this phase and all of the potential buildings lay at the roadside in the northern part of the excavated area.

Stane Street

2.2.2 Little evidence was recovered for the Roman road itself since the actual line of the road was located slightly further north of the main excavation area. During drainage works, a cobbled surface was encountered beneath alluvial deposits and is indicated on Fig. 2; however, this was not observed within further drainage works to the north of the main excavation area. It is possible that, as this area was immediately adjacent to the existing leisure centre, it had suffered a higher degree of truncation during the construction of the modern building.

Plot 1

2.2.3 Bounded by a ditch (**2069**) to the east, with an uncertain western limit, Plot 1 extended the full length of the site and encompassed a projected area of at least 2205m^2. Ditch **2002** created a division between roadside activity at the north, and the rest of the enclosure. Further internal divisions were evidenced by ditches **2052** and **2019**.

2.2.4 A large sub-rectangular and flat-bottomed pit (SFB **2168**, Plate 5) measuring 10.3m by 8.8m has been interpreted as the remains of a sunken-featured building (SFB). Large assemblages of metal objects, pottery, animal bone and oyster shell were recovered from this feature, demonstrating its 1st to 2nd century date.

2.2.5 A somewhat smaller pit (Pit/SFB **4064**) measuring 5.2m by 5.5m was encountered initially during the evaluation and further defined during the watching brief phase of work and may represent the below ground component of another building.

2.2.6 Located around these buildings were five pits (Pit Group **2260**) which measured between 0.44m and 1.6m in diameter.

2.2.7 South of ditch **2002**, Pit Group **2573**, comprising ten pits measuring between 0.4 and 2.16m in diameter, were located within the southern half of the site.

Plot 2

2.2.8 Located centrally within the excavation, Plot 2 was bounded by three ditches (**2069**, **2135** and **2562**) and encompassed an area of approximately 2135m2. Ditch **3223** and Post-structure **2364** (probably a fence line running alongside the ditch) formed a partial division between the immediate roadside area and the remainder of the enclosure. This was the only projected plot which had its full width exposed.

2.2.9 Although only partially revealed and partially truncated, Pit/SFB **2109** (Plate 6) was similarly positioned and of similar dimensions to Pit/SFB **4064** in Plot 1. It measured 4.9m by at least 3.3m and may represent a further SFB. Large assemblages of pottery and animal bone were recovered from this feature.

2.2.10 A large number of postholes, relating to several post-built buildings, were located either side of Ditch **3223**. These have been provisionally split into Structures **2979** and **2926**.

2.2.11 Post structure **2979** was rectangular and measured 9.5m by 5.3m and comprised 17 postholes and small pits which measured between 0.25 and 0.8m in diameter.

2.2.12 Post structure **2326** (Plate 7) may either represent the remains of a single long building or two separate structures as depicted on Fig. 3.1. It measured 17m by 4.4m and comprised 32 postholes which measured between 0.2 and 0.8m in diameter.

2.2.13 Located around and to the rear of these structures, 15 pits (Pit Group **2344**) measured between 0.3m and 1.95m in diameter.

2.2.14 Pit **2899** and Pit Group **2138** were located towards the south of the enclosure and probably represent quarrying. Pit **2899** measured 3.1m in diameter and Pit Group **2138** comprised seven pits which measured between 0.6m and 1.74m in diameter and produced large quantities of pottery.

2.2.15 Pit Group **2079**, to the northwest of Pit **2899** comprised three pits which measured between 0.37m and 0.8m in diameter. Large quantities of pottery were recovered from these pits.

Plot 3

2.2.16 This enclosure was only partially exposed by the excavation and was bounded by Ditch **2562** at its western edge. Cropmark evidence indicates that its southern boundary was roughly equidistant from the road, reflecting that of Plot 2, meaning that the area can be estimated as encompassing approximately 2200m^2. Ditch **2562** produced large quantities of pottery and animal bone.

2.2.17 Ditch **4054** observed in a watching brief pipe trench probably formed a sub-division within this area.

Southern Trackway (Trackway 1)

2.2.18 A pair of parallel ditches (**4181** and **4183**) set 3.5m apart were exposed during drainage monitoring and represent a trackway running parallel to Stane Street (Figure 2). Layers of metalling observed between the two ditches indicate that this track was of substantial construction, although no dating material was recovered.

Plot 4

2.2.19 To the south of the enclosures off Stane Street, Plot 4 was less regularly laid out and changed the most during subsequent phases. Three sides of an enclosure which probably extended as far as the trackway to the south (Trackway 1) was formed by ditch **2743**. It is possible that a post-built structure (**2530**), comprising eight postholes measuring between 0.26 and 0.7m in diameter, actually formed a replacement of the southern boundary of Plot 2 (originally represented by Ditch **2135**), perhaps explaining the spread of pitting over the line of that ditch within this phase (Pit Group **2138**).

2.2.20 The enclosure formed by Ditch **2743** encompassed an area of approximately 450m^2 (taking the Trackway 1 as its southern limit) and contained Pit Group **2613** which comprised nine pits and postholes measuring between 0.35m and 1.86m in diameter.

2.2.21 Ditch **2524** and Pit Groups **2514** and **2569** were located to the north and west of this enclosure. Pit Group **2514** to the west, comprised nine pits and postholes which measured between 0.4m and 1.89m in diameter and produced large amounts of pottery and animal bone. Pit Group **2569** to the north comprised nine pits and postholes which measured between 0.36m and 2.06m in diameter.

Phase 1 finds inventory

Feature Group	Plot	Metal objects	Residual Flint	Burnt stone	Worked stone, whetstone in brackets	Pottery	Fired clay, (No of structural)	CBM	Iron slag fragments (with additional HS)	Copper working	Glass	Worked bone	Animal Bone fragments	Shell
Pit 4041	N/A													
Ditch 2002	1		1			9		2				1	3	1
Ditch 2019	1					4								
Pit/SFB 4064	1					30		4						
Ditch 2052	1					13							30	

Feature Group	Plot	Metal objects	Residual Flint	Burnt stone	Worked stone, whetstone in brackets	Pottery	Fired clay, (No of structural)	CBM	Iron slag fragments (with additional HS)	Copper working	Glass	Worked bone	Animal Bone fragments	Shell
SFB 2168	1	49	13			1455	14 (5)	4	1 (13.79g)		2		386	209
Pit Group 2260	1		3			14							1	
Ditch 2069	1	2	4		2	60			0 (5.6g)				60	
Pit Group 2573	1					18							9	
Pit/SFB 2109	2	9	5			1001	15	7	1 (3.54g)				139	
Ditch 2135	2		1			11							2	
Ditch 3223	2													
Ditch 2562	2	8	5		3	683			14(3.66)				123	
Pit Group 2138	2	1				212							17	
Post structure (s) 2326	2	1				4								
Pit Group 2344	2	1	4			47		1					52	
Post Structure 2364	2					16							7	
Pit 2899	2	1	1			1								
Post Structure 2979	2					17	1	2					7	
Pit Group 2079	3	3	2			206	2	4	2(7.92g)		1		34	
Ditch 2603	3		1			18							9	
Ditch 4054	3					6								
Ditch 2524	4					1								
Post Structure 2530	4	2				2							3	
Pit Group 2613	4	4				33		6			1		3	
Ditch 2743	4	1				63							2	
Pit Group 2569	4													
Pit Group 2514	4	3				262	2				1		179	

Table 2: Phase 1 finds inventory

2.3 Phase 2: 2nd century AD

Introduction

2.3.1 Phase 2 saw changes to the layout to this part of the settlement and also the most intensive period of use of the site (Fig. 3.2). Buildings were constructed further back

from the street and paths or tracks between plots were established, allowing movement for people and livestock. Each plot was clearly divided by the divisions formed by two main routes: Trackway 2 (defined by ditch **2165** and the western part of ditch **2071**) and Trackway 3 (defined by ditch **2081** and the eastern part of ditch **2071**).

Plot 1

2.3.2 Ditches **2165** and **2014** (Plate 8) formed a new eastern boundary of Plot 1 with Ditch 2014 producing very large assemblages of pottery, animal bone and shell. Ditch **3027** formed a similar roadside sub-enclosure within this plot to that evident in the preceding phase, with Ditch **4038** (observed during the watching brief) forming the enclosure's northern boundary. Two partially exposed features (**2904** and **4062**) may represent the remains of sunken-featured structures adjacent to the road.

2.3.3 The southern part of the enclosure had access from Trackway 2 and contained a sunken-featured building (**2246**; Plates 9-12). The sunken component of this building measured 6m by 4.3m but it was surrounded by postholes, suggesting that the superstructure of the building was in excess of this. This structure, along with other nearby features, contained large amounts of metalworking debris including evidence for both iron and copper working. These assemblages combined significant amounts of hammerscale, indicating that it was used as a smithy or workshop. Aside from the metalworking evidence, this feature also produced large quantities of metal objects, pottery, animal bone and shell and a single neonate was buried in its upper fill.

2.3.4 Pit **2033** and Pit Group **2026** were located to the south of SFB 2246. Pit **2033** measured 1.35m in diameter and Pit Group **2026** comprised seven pits which measured between 0.88m and 2.5m in diameter.

2.3.5 Another pit or sunken-featured building (**4008**; Plate 13) was only partially exposed during the monitoring works and measured 8.3m by 3.2m. It may actually have existed within another enclosure entirely although the alignment of the feature matched that of SFB **2246** and Ditch **3027**.

Plot 2

2.3.6 Ditch **2071** in Plot 2 formed a continuous enclosure with no visible breaks within the excavation area. It was bounded by Trackway 2 to the west and Trackway 3 to the east. Cropmarks suggest that this enclosure had a tapering entrance leading from its northeast corner up to the main road.

2.3.7 To the north of Ditch **2071**, Ditch **2981** subdivided the roadside area, separating a sunken-featured building (**2686**) from Pit Group **2193**. SFB **2686** (Plates 14-15) measured 7.9m by 8.5m and contained large quantities of metal objects, pottery, animal bone, fired clay, and three complete and one truncated neonate burials (Plate 16).

2.3.8 Pit Group **2193** comprised seven pits which measured between 0.27m and 1.3m in diameter.

2.3.9 Within the enclosure formed by Ditch **2071** were a number of post-built structures and pit groups.

2.3.10 Post-built structure **2111** measured 12.6m by 5.9m forming a rectangular building. It consisted of ten postholes which measured between 0.2 and 0.54m in diameter and two pits in its south-east corner which measured 1.1m and 1.4m in diameter.

2.3.11 Post-built structure **2208** formed a fence line which respected Ditch **2071** and comprised eight postholes which measured between 0.34 and 0.6m in diameter.

2.3.12 Other short lines of post holes (**2761** and **2804**) probably represent short stretches of fence or partially truncated buildings.

2.3.13 Pit Group **2350** (Plate 17) comprised 13 pits which measured between 0.6m and 2.8m in diameter.

2.3.14 Adjacent to Structure **2111,** Pit Group **2100** comprised four large pits which measured between 1.58m and 3.26m in diameter and produced a large assemblage of pottery.

2.3.15 Pit Group **2383** was located to the south of Structure **2111** and comprised three pits which measured between 0.68m and 2.5m in diameter.

2.3.16 Pit **2739** measured in 1.4m in diameter and contained a complete undamaged pot (a greyware jar) at its base.

Plot 3

2.3.17 Trackway 3 extended to the south-west from Stane Street and curved to the south-east around the back of Plot 3. Ditch **2081** formed part of this trackway and also the western and southern boundary of Area 3. Within the enclosed area, Ditches **2719** and **4056** may have formed internal divisions. Ditch **2081** produced a large quantity of pottery.

2.3.18 Exposed during drain monitoring a large feature at the roadside end of this area (**4048**) exhibited the same characteristics and fill sequence as the other large sunken-featured buildings.

2.3.19 Pit Group **2270** was located between ditches **4056** and **2719** and comprised two pits which measured 0.6m and 0.8m in diameter.

2.3.20 Structure **2932** (a short stretch of postholes of unclear function) and Pit Group **2558** (comprising two pits which measured 0.8m and 2.3m in diameter) were the only other features recorded within this area.

Plot 4

2.3.21 In the southern part of the site, Ditch **2012** (Plates 18-19) seems to have been non-continuous, perhaps to allow movement between the area it enclosed and Trackways 2 and 3. It enclosed Plot 4 which was further sub-divided by Structure **2930** which comprised seven postholes which measured between 0.34m and 0.5m in diameter. A large assemblage of pottery was recovered from this ditch.

2.3.22 Pit Groups **2037** (Plates 20-23) and **2057** (Plates 24-25) were situated either side of the 16m long fence line formed by Structure **2930**. Pit Group **2037** comprised seven pits which measured between 1m and 2.94m in diameter and produced large assemblages of pottery and animal bone. Pit Group **2057** comprised five large pits and eight smaller pits which measured between 0.8m and 3.2m in diameter. This pit group produced large assemblages of metalwork, pottery, CBM and animal bone, while several of the larger pits in this group also contained abundant crop-processing waste. Pit **2677** (Pit Group **2057**) contained the remains of an oven (Plate 25) which was potentially used for drying out cereals and was possibly the source of this material.

2.3.23 Ditch **2556** resembled a partial ring gully, although since this building type was not evidenced elsewhere on the site, it was more likely to have been a short stretch of gully associated with a small shelter or wind-break.

2.3.24 Pits **2708** and **4036** were located at the southern end of site within Trackway 3.

Phase 2 finds inventory

Feature Group	Plot	Metal objects	Residual Flint	Burnt stone	Worked stone, whetstone in brackets	Pottery	Fired clay, (No of structural)	CBM	Iron slag fragments (with additional HS)	Copper working	Glass	Worked bone	Animal Bone fragments	Shell
Pit 2708	N/A													
Pit 4036	N/A					7								
Ditch 4038	1													
Ditch 2014	1	8	1		4 (1)	944	14		1				379	96
Pit Group 2026	1	9	2		2	113		2					27	
Pit 2033	1	2	1			113			37 (7.5g)				73	
Pit/SFB 4062	1					9							2	
Ditch 2165	1	1	5			152	7		4				94	
SFB 2246	1	151		1	5 (1)	1070	5	10	3 (6.66g)	15			255	52
Pit/SFB 2904	1					16							4	
Ditch 3027	1					31							13	
Pit/SFB 4008	1					107		6			1		9	1
Ditch 2071	2	16	2		3	315		9	0 (0.98g)			1	88	
Pit Group 2100	2	9			4	401		8	16 (0.38g)		3		55	9
Post Structure 2804	2													
Post Structure 2111	2						2							
Pit Group 2193	2	7				125	2	2					28	

Feature Group	Plot	Metal objects	Residual Flint	Burnt stone	Worked stone, whetstone in brackets	Pottery	Fired clay, (No of structural)	CBM	Iron slag fragments (with additional HS)	Copper working	Glass	Worked bone	Animal Bone fragments	Shell
Post Structure 2208	2			1		32			0 (3.98g)				2	
Pit Group 2350	2	2	1			273	5 (1)	8	2 (1.8g)		2		101	1
Pit Group 2383	2	2				102	1						20	
SFB 2686	2	18	20			1069	50 (26)	6	3 (4.71g)				333	17
Pit 2739	2		1			11			0 (0.68g)				10	
Post Structure 2761	2				2	4								
Ditch 2981	2	1				11							4	
Ditch 2719	3													
Ditch 2720	3													
Post Structure 2932	3													
Pit Group 2558	3					12							3	
Ditch 4056	3													
Pit/SFB 4048	3					12		1					1	
Ditch 2081	3	3	2	1		348	1		22				80	
Pit Group 2037	4	3	30			327	19 (1)	2	0 (2.38g)				250	
Ditch 2556	4					1		1						
Post Structure 2930	4												11	
Pit Group 2057	4	23	2		3	637	1 (1)	31	1 (22.14g)		1		202	3
Ditch 2012	4	2	1			336							38	

Table 3: Phase 2 finds inventory

2.4 Phase 3: 2nd to mid 3rd century AD

Introduction

2.4.1 Phase 3 saw several changes to the make-up and layout of the settlement (Fig. 3.3). A single sunken-featured building was present during this phase with a possible transition towards the dominance of post-built structures. Some of the boundaries originally cut as ditches were reinstated but replaced as fence lines rather than ditches, particularly on the western side of site. This phase (as well as later Phase 5) showed a change in pit digging behaviour, with fewer pits being dug to the west of the site and

a gradual shift to the east: it is tempting to view this as indicating a slight contraction of the settlement or a shift in focus away from the riverside and towards the purported settlement centre to the east.

Plot 1

2.4.2 The general shape of Plot 1 was maintained with Ditch **2308** and Post Structure **2050** creating an enclosure. Post Structure **2050** comprised 11 postholes and post-pits which measured between 0.25 and 0.1.1m in diameter.

2.4.3 A rectangular arrangement of evenly spaced postholes with packing stones (Post Structure **2304**) indicated the presence of a building aligned with and to the west of Ditch **2308**. The deposits associated with Phase 4 (see below) made the cuts of the postholes themselves hard to define, although the shape of the structure was clearly evident in the form of packing stones. The building measured at least 7.3m by 5.8m.

2.4.4 Pit Group **2378** was located to the south of this structure and comprised two large pits which measured 2.2m and 2.9m in diameter.

Plot 2

2.4.5 The trackway between Plots 1 and 2 was maintained in Phase 3 but was defined by fence lines as well as ditch boundaries. During this phase, Plot 2 was bounded by ditch **2291** and Post Structure **2117** to the west, Ditch **2073** to the south and Ditch **2615** to the east.

2.4.6 Ditch **2615** terminated short of a partially exposed building (Post Structure **2322**) which measured 14m by 6m and comprised 22 postholes measuring between 0.13m and 0.88m in diameter and featured a potential beam slot room division.

2.4.7 North of this structure at the roadside, but only partially exposed, another sunken-featured building (**3093**, Plates 26-30) measured at least 11.5m by 7.2m and produced large amounts of metalwork, works stone, pottery, fired clay, CBM animal bone and shell. Two neonate burials were located within this feature (Plate 29).

2.4.8 Situated between these structures was a cluster of seven pits (Pit Group **2825**) which measured between 0.4m and 2m in diameter and produced a large amount of pottery between them.

2.4.9 Aligned with the centre of Structure **2322**, Post Structure **2989** formed a sub-division within this area and comprised four postholes which measured between 0.27m and 0.57m in diameter.

2.4.10 At the south-east corner of the area, Post Structure **2774** represented a building which measured 11m by 9m and comprised 16 postholes measuring between 0.18m and 0.72m in diameter.

2.4.11 To the west, Pit Group **2196** comprised seven large pits which measured between 1.7m and 2.8m in diameter.

Plot 3

2.4.12 Ditches **4058**, **2565**, **4030** and Post Structure **2619** formed the edges of enclosures within the area previously defined as Area 3. These features were insufficiently revealed to determine their full extent or function.

2.4.13 Pit Group **2710** was located at the far south of site and comprised four pits which measured between 0.5m and 0.34m in diameter.

Plot 4

2.4.14 Ditch **2073**, Ditch **2615** and Post Structure **2147** enclosed an area at the south of the site. Post Structure 2147 comprised six postholes which measured between 0.4m and 1m in diameter.

2.4.15 Another building (Post Structure **2542**) was located at the north-east corner of this enclosure and measured 11.2m by 5.6m. It comprised 11 postholes and post pits which measured between 0.33m and 1.46m in diameter.

2.4.16 Pit Group **2385** was located to the east and comprised three pits which measured between 1.2m and 2.32m in diameter.

Phase 3 finds inventory

Feature Group	Plot	Metal objects	Residual Flint	Burnt stone	Worked stone, whetstone in brackets	Pottery	Fired clay, (No of structural)	CBM	Iron slag fragments (with additional HS)	Copper working	Glass	Worked bone	Animal Bone fragments	Shell
Ditch 4030	N/A													
Pit Group 2710	N/A													
Post Structure 2050	1					15	1						3	
Ditch 2308	1	1				1								
Post Structure 2304	1													
Pit Group 2378	1					1								
Post Structure 2322	2	1	1			5		1					4	
Pit Group 2196	2	12	5		2(1)	123	5	13	0(10.62)				55	
Ditch 2291	2		1			169	2	1					78	
Ditch 2073	2	9				54		7					92	
Ditch 2615	2	5			1	39		3					10	
Pit Group 2825	2	7	1			229	1	6	6				52	
SFB 3093	2	85	16	1	23(2)	2317	19(3)	60	3(3.12)		2		758	41

Post Structure 2774	2	1	3			4								
Post Structure 2989	2													
Post Structure 2117	2					3							3	
Ditch 2565	3					11								
Post Structure 2619	3					1								
Ditch 4058	3													
Post Structure 2147	4					5								
Pit Group 2385	4	2			6	82		1	1				27	
Post Structure 2542	4					8								

Table 4: Phase 3 finds inventory

2.5 Phase 4: 3rd century AD

Introduction

2.5.1 Contexts attributed to Phase 4 consisted purely of 'dark earth' deposits and it is unclear at this time whether these should be viewed as a separate phase of activity (Fig. 3.4). While it is probable that there may have been a shift to middening as refuse disposal rather than pit digging, it is also possible that these roadside deposits accumulated over the preceding phases as a result of intensive activity. Fired clay from *in situ* wattle panels and a high concentrations of iron nails indicate that these homogenous seeming deposits may contain the remains of burnt down or collapsed organic structures. Further analysis of the artefacts and dating evidence from these layers may lead to a greater level of definition and perhaps some indications of depositional sequence.

2.5.2 For the purposes of assessment, these layers have been grouped according to their corresponding area with layers 2007, 4007 and 4069 apportioned to Plot 1, 2176 and 2188 to Plot 2 and 4029 to Plot 3. Within the main excavation area artefacts from these deposits were collected in a 2m by 2m grid system, to allow distribution plots to be created during the analysis stage. Large quantities of all the main finds groups were recovered from these layers.

Phase 4 finds inventory

Feature Group	Plot	Metal objects	Residual Flint	Burnt stone	Worked stone, whetstone in brackets	Pottery	Fired clay, (No of structural)	CBM	Iron slag fragments (with additional HS)	Copper working	Glass	Worked bone	Animal Bone fragments	Shell
Layer 2007	1	198	9	2	1	2253	39(14)	35	10(3.94)		24	2	767	1
Layer 4069	1					39		1					15	
Layer 4007	1							7						
Layer 2176	2	56	4		2(1)	600	217 (212)	48	0(12.3)				210	
Layer 2188	2	87	3		3(3)	1238	17	79	6		1	1	366	
Layer 4029	3					15		1					4	

Table 5: Phase 4 finds inventory

2.6 Phase 5: 3rd to mid 4th century AD

Introduction

2.6.1 The latest evidence for occupation of the site was evidenced by a pair of small enclosures and two potential post-built structures (Fig. 3.5). Activity including pit digging was focused in the north-east of site, close to the roadside, with no features being found to the south. Ditches **2289** and **2287** enclosed a small area in which three postholes (Post Structure **2285**) may represent part of a building or stock enclosure.

2.6.2 Ditch **2395** formed an enclosure to the east which contained no features, although Post Structure **2879**, outside and immediately to the south of it, was aligned with its north-east to south-west running ditch. This small potential building measured 7m by 5m and comprised seven postholes which measured between 0.32m and 0.5m.

2.6.3 A group of pits (Pit Group **2560**) were located at the eastern edge of the site. This group comprised seven pits which measured between 0.7m and 2.2m in diameter. These produced a large amount of pottery and animal bone.

Phase 5 finds inventory

Feature Group	Plot	Metal objects	Residual Flint	Burnt stone	Worked stone, whetstone in brackets	Pottery	Fired clay, (No of structural)	CBM	Iron slag fragments (with additional HS)	Copper working	Glass	Worked bone	Animal Bone fragments	Shell
Ditch 2287	1	1				142	1						59	
Ditch 2289	1	6				53		1			1		16	
Ditch 2395	1	4	3			74	4	2					44	3
Post Structure 2285	1													

Feature Group	Plot	Metal objects	Residual Flint	Burnt stone	Worked stone, whetstone in brackets	Pottery	Fired clay, (No of structural)	CBM	Iron slag fragments (with additional HS)	Copper working	Glass	Worked bone	Animal Bone fragments	Shell
Pit Group 2560	2	5				324		4				1	103	4
Post Structure 2879	2					1								

Table 6: Phase 5 finds inventory

2.7 Phase 6: 4th century AD

Introduction

2.7.1 By the end 4th century, it appears that at least this part of the settlement had been completely abandoned with the area reverting to fields (Fig. 3.6), as evidenced by a small number of shallow ditches within the excavation area (Ditches **3091**, **2220** and **2021**). Similarly aligned ditches can be seen to the east as cropmarks, making it possible that most of the Grange Paddocks area was fields by this point. One of these cropmarks can perhaps be interpreted as crossing the line of Stane Street, suggesting that the river crossing here had also fallen out of use at this time.

Phase 6 finds inventory

Feature Group	Plot	Metal objects	Residual Flint	Burnt stone	Worked stone, whetstone in brackets	Pottery	Fired clay, (No of structural)	CBM	Iron slag fragments (with additional HS)	Copper working	Glass	Worked bone	Animal Bone fragments	Shell
Ditch 2021	N/A					1								
Ditch 2220	N/A													
Ditch 3091	N/A					51	1						36	
Pit 4003	N/A							2						

Table 7: Phase 6 finds inventory

3 FACTUAL DATA: ARTEFACTS

3.1 General

3.1.1 The following finds assemblages were recovered:

Material	Number	Weight (g)
Metalwork	972	-
Iron slag and ironworking debris	137	12352
Cu-alloy metalworking debris	15	117
Worked flint	153	-
Burnt flint	10	217
Burnt Stone	6	416
Worked Stone	63	11009
Pottery	18716	334440
Fired Clay	1415	10500
Ceramic building material	310	49000
Glass	55	523
Worked bone	7	-

Table 8: Finds assemblages

3.2 Metalwork *by Chris Howard-Davis (Appendix B.1)*

3.2.1 A substantial assemblage of metalwork, 972 objects in total, was recovered from the excavation and subjected to a rapid assessment. Whilst objects were recovered from across the excavation area there was a higher concentration from the north of the site at the roadside (Fig. 4). Following assessment, many of items have been cleaned and conserved and a selection of objects feature in Plates 31-48.

Coins

3.2.2 A total of 199 coins, nearly all Romano-British, were recovered from excavation of archaeological features and through metal detecting. This total includes two hammered silver medieval coins. Only three silver Roman coins were recovered from the excavation, the majority being copper alloy. Whilst many coins were recovered during machine stripping, a great number were recovered from excavated features. The coins appear to fall into two broad groups, one being 1st century issues (often very worn) dating to the period of conquest, the other being mid-late 2nd century (Marcus Aurelius) onwards, with 3rd-century radiates and early-to-mid 4th-century coins of the family of Constantine both well represented.

Copper alloy

3.2.3 An assemblage of 159 copper alloy objects were recovered from the excavation. Many of these are dress accessories consisting of brooches (18), hairpins (11), finger rings (2), bangles (2), buckles (2) and belt plates (2) along with items relating to personal hygiene (10), a fish hook and other and general household items (8). A small collection of militaria was also recovered including components of both plate armour and scale mail, as well as a lozenge-shaped pendant and an apron terminal.

Iron

3.2.4 In total, 586 fragments of ironwork were examined prior to x-radiography and as a consequence the identifications remain provisional. Of the group, 426 are iron nails and high concentrations were recovered from the roadside SFBs and their associated layers. Other items relating to timber structures include carpenter's dogs, T-shape holdfasts and a variety of wall hooks and loops as well as a large latch lifter all of which were recovered from SFB backfills.

3.2.5 Other notable iron finds include a stylus, a variety of types of blades, chisels, wool-combs a tenter hook, drop handles, another fish hook, a linch pin and an object initially identified as a hoe (and described as such in the appendix) but which after x-ray appears to be a spear head (this will be investigated further at analysis).

Lead

3.2.6 A relatively small group of 39 fragments of lead were recovered, one of which (a steelyard weight) is made from lead and iron. Other recogniseable objects include an additional steelyard weight (minus the iron suspension loop), a pot mend and a spindle whorl.

3.3 Iron slag and ironworking debris *by Simon Timberlake (Appendix B.2)*

3.3.1 A total of 12.35 kg (137+ pieces) of iron slag and ironworking debris was recovered from 76 contexts. All of this was from secondary iron smithing, and mostly forging work. Two features in particular (pit **2121** (Phase 2 Group **2100**) and ditch **2726** (Phase 1 Group **2562**) had large amounts of ironworking slag/debris associated with them. A tiny amount of iron slag with some copper contamination in it was noted (context 2034 (Pit **2033**, Phase 2) and context 2673 (Ditch **2562**, Phase 1)). However, these pieces were associated with iron smithing not bronze working.

3.4 Cu-alloy metalworking debris *by Simon Timberlake (Appendix B.3)*

3.4.1 A total of 117g (15 pieces) of copper alloy metalworking debris was recovered and examined. Most of this material came from the fill(s) of a single feature, Phase 2 SFB **2246**.

3.4.2 The metalworking debris consists of 22g of vitrified-coated crucible (1 sherd), 35g of copper alloy metal casting spill, 46g of un-melted or solidified copper alloy residue from the base of a crucible, 10.51g of broken-up copper alloy scrap and off-cuts for re-melting and 3.33g of casting sprue.

3.5 Flint *by Lawrence Billington (Appendix B.4)*

3.5.1 The excavation produced a total of 153 worked flints and 10 fragments (217g) of unworked burnt flint. The vast majority of the worked flint was recovered as a residual element from later cut features and includes a high proportion of Mesolithic and earlier Neolithic material.

3.6 Burnt Stone *by Simon Timberlake (Appendix B.5)*

3.6.1 A total of 416g of burnt but otherwise unused cobble stone was recovered from the excavation. Most of this had the characteristics of prehistoric burnt stone, either as hearth stone or as 'potboiler'. This stone was probably re-deposited within the features in which it was found. Its original use may have been for cooking in pits, with most of it probably being Iron Age in date.

3.7 Worked Stone *by Simon Timberlake (Appendix B.6)*

3.7.1 Some 11009g of worked stone, consisting mostly of rotary quern stone (9742g; x56 pieces) and whetstone (1267g; x7 pieces) was recovered from the excavation, all of which was probably Roman in date. The largest amounts (by weight) of quern and whetstone came from context 3090 (1911g) SFB **3093** phase 3, context 2816 (1427g) Pit Group **2196** Phase 3, context 2690 (1091g) Pit Group **2057** Phase 2, context 2016 (909g) ditch **2014** Phase 2 and context 2506 (823g) SFB **2246** Phase 2.

3.8 Roman Pottery *by Katie Anderson (Appendix B.7)*

3.8.1 A very large assemblage of Roman pottery was recovered from the site, totalling 18,716 sherds weighing 334.440kg: for a site of this size, this represents an extraordinary amount of material. For the post-excavation assessment, a large sample of the total assemblage was selected for full recording and based on a list of key contexts which would provide the greatest overview and characterisation of the assemblage as well as answering context specific questions. In total 5,728 sherds were recorded for the assessment, weighing 81225g and representing an estimated 879 vessels (ENV) and 159.84 EVEs (estimated vessel equivalent), which accounts for approximately 30% of the total assemblage by sherd count (c.25% by weight).

3.8.2 The pottery assemblage suggests that activity began in the decades following the Roman conquest and continued into the later Roman period, although based on the material selected from analysis at this stage, the site peaked during the later 1st-mid/later 2nd century AD. A wide range of fabrics were recorded and the range of fabrics within the sourced wares demonstrates that the site had access to a relatively diverse trade network, which is likely to be a result of its roadside position as well as the proximity of the site to the River Stort, thus also taking advantage of waterborne trade.

3.8.3 The sample assemblage was dominated by coarseware fabrics, which represent 79.7% by sherd count and 78.6% by weight, totalling 4565 sherds weighing 63860g. Romano-British finewares account for a further 14.4% of the assemblage by sherd count (13.3% by weight), totalling 824 sherds weighing 10790g. The remaining 5.9% of the assemblage (8.1% by weight) represents imported wares (339 sherds, 6575g), dominated by samian wares, which total 237 sherds weighing 3241g and represents an estimated 82 vessels and 11.77 EVEs.

3.8.4 Approximately 8% of the assemblage (by sherd count) was noted as having usewear evidence, which is relatively high. This evidence included sooting (exterior and

interior), limescale residue from boiling/holding water, repeated grinding/use and two vessels which both have three post-firing notches cut into the rims.

3.9 Fired Clay *by Simon Timberlake (Appendix B.8)*

3.9.1 A total of 10.5 kg (1415 pieces) of fired worked daub was recovered from this site. Just 125g (2 pieces) of this consisted of small (unidentified) worked clay items whilst another 1.4 kg (estimated) appeared to be associated with the construction of a moulded clay pedestal base for either an oven or a kiln. The assemblage contains a significant component of structural daub (wattle and daub panel), with up to 6.8 kg of the latter material recorded. Much of this structural daub is both burnt and sooted, in particular upon the actual wall surfaces themselves, suggesting that the 'buildings' were either burnt *in situ*, or else the wall panels themselves were ripped off and burnt within a bonfire.

3.9.2 The largest amounts of structural daub came from contexts 2199 (3020g) ,layer 2176, Phase 4 and 2466 (1753g) layer 2188 Phase 4. A slightly different type of structural daub was associated with context 3087 (174g) SFB **3093**, Phase 3 and a (300g) piece of painted wall daub possessing traces of a limewash coat was recovered from pit **3209** Pit Group **2350**, Phase 1.

3.10 Ceramic building material *by Simon Timberlake (Appendix B.9)*

3.10.1 A total of 49 kg (x 310 pieces) of CBM was recovered from the excavation. This consisted of fragments of Roman box-flue and other hollow flue tile, undifferentiated *pila* tile brick, pila *laterculus*, *lydium*, *bipedalis* and *sesquipedalis*(?) bricks, *imbrex* and *tegula* and other 'flat' roof tile, undiagnostic Roman tile/brick, *tessara* and mortar. A significant amount of the assemblage (*c.*75%) was fresh and pristine, although often burnt, sooted and broken up. It can therefore be concluded that the material represents a Roman brick and tile assemblage which was discarded and dumped, but which for the most part was probably in its primary depositional context.

3.10.2 The largest amounts of tile and brick were recorded from contexts 2459 (6071g, Layer 2176, Phase 4), 2199 (4224g, Layer 2176, Phase 4), 3086 (4021g, SFB **3093**, Phase 3), 2618 (3575g, Pit Group **2613**, Phase 1) and 2008 (2440g, Layer 2188, Phase 4). Most was associated with 3rd century AD contexts (*i.e.* 12.7 kg from 2459, 2199 and 2008 combined), although 4021g came from a 2nd to mid-3rd century AD context (3086) and 3575g from a mid 1st to 2nd century context (2618).

3.11 Glass *by Carole Fletcher (Appendix B.10)*

3.11.1 A small to moderate assemblage (523g, 55 shards) of mainly blue/green Roman glass was recovered from ditches, pits and other features, although the bulk of the Roman glass assemblage was recovered from the various layers that make up Group 2007 in Phase 4. A single piece of post-medieval glass was recovered as an intrusive element in Ditch **2002**. Aside from this isolated intrusive element, the assemblage is clearly Roman, with bowls, jugs and bottles all represented. There are a few shards tentatively identified as window glass, alongside a number of shards where their identification of type was uncertain and there may be more window glass among these shards.

3.12 Worked bone *by Ian Riddler (Appendix B.11)*

3.12.1 Seven worked bone objects were recovered from the excavation including a range of bone pins and a pack needle.

3.12.2 Pack needles are curved antler tine ends, often but not invariably equipped with distinctive notches on the inner or outer curves, as well as one or several perforations nearby that allow cord to pass through the broad end of the implement and to be secured there. The cord would be carried behind the pack needle across packaging in order to secure it firmly for transportation.

4 FACTUAL DATA: ENVIRONMENTAL AND OSTEOLOGICAL EVIDENCE

4.1 General

4.1.1 A total of 60 environmental samples were taken during the excavation. The following assemblages were recovered:

Material	Number	Weight (g)
Human skeletal remains	11 individuals	
Faunal remains	5765 fragments	71533
Mollusca	322 identifiable (+334 frags)	3461

Table 9: Ecofactual assemblages

4.2 Charred Plant remains *by Rachel Fosberry (Appendix C.1)*

4.2.1 Sixty bulk environmental samples were taken from the fills of features within the excavated area at Grange Paddocks in accordance with the sampling strategy for this site which aimed to maximise the recovery of ecofacts and small artefacts from all feature types, phases and areas. The environmental samples from the site produced abundant assemblages of charred plant remains that indicate large scale production, processing and possibly storage and transportation of cereal grain.

4.2.2 Preservation of plant remains is predominantly by carbonisation (charring) which only occurs under certain conditions when plant material is incompletely burnt and reduced to pure carbon. It is important to note that any surviving charred remains will only represent a small proportion of the original material being burnt. There is clear bias towards the large sunken-feature buildings (SFBs) located along the northern boundary of the site, which were the predominant features encountered during the excavation. The most productive samples came from obvious charcoal-rich deposits within these features and also from a cluster of pits to the south.

4.3 Human Skeletal remains *by Helen Webb and Natasha Dodwell (Appendix C.2)*

4.3.1 A total of ten articulated immature skeletons (2172, 2277, 2513, 2564, 2685, 3082, 2713, 3082, 3083, 3242, 3277) and a single disarticulated bone (2688) were submitted for osteological analysis. The remains are provisionally dated to the 2nd-3rd century (Phases 2 and 3) and were, aside from 2564 which was from a large pit (Pit Group **2037**, Phase 2) all recovered from within sunken-featured buildings: one from SFB **2246** (Phase 2), three and a disarticulated individual from SFB **2686** (Phase 2) and four from SFB **3093** (Phase 3). Whilst many of the skeletons were disturbed and/or incomplete, it was possible to identify the burial position for some. These varied, with some skeletons lying supine (2172, 2277, 2564) and some crouched, on their side (2713 and 3082 on right side, 3083 on left side). Orientations of the burials also varied (for example, south to north, west to east and south-west to north-west).

4.4 Faunal remains *by Zoe Ui Choileain (Appendix C.3)*

4.4.1 A total of 71.5kg (5765 fragments) of animal bone was recovered from the excavation comprising 1391 countable elements, of which 1061 were identifiable to taxon. Large quantities of the animal bone were recovered from the backfill of the roadside sunken-featured buildings, as well as from pits and ditches across the site. The assemblage displays a high degree of butchery, with 129 fragments having cut or chop marks. For the most part, these are indicative of domestic waste, as displayed by multiple chop marks on many fragments.

4.4.2 There is a significant rise in both cattle and sheep bone in Phases 1 and 2, with numbers beginning to drop in Phase 4. It is possible that this reflects the height of the settlement period. Fused and unfused bone was recorded for cattle and sheep and it is likely that animals were being bred on site. There is a slow increase in pig bone, albeit to a much lesser extent.

4.5 Mollusca *by Carole Fletcher (Appendix C.4)*

4.5.1 Marine mollusca were collected by hand and by sampling during the archaeological works. In total, 322 identifiable shells and 334 indeterminate fragments of shell, weighing 3.461kg, were recovered, from a wide range of features, ditches, pits, midden deposits and the SFBs. The shells recovered are almost entirely edible examples of oyster Ostrea edulis, from estuarine and shallow coastal waters, with small fragments of mussel Mytilus edulis recovered from a single sample. Few contexts, or cut features, contained sufficient shells to indicate one or more meals of oysters alone; however, they may have been combined with other foods. The largest number of shell fragments was recovered from the midden layers.

4.5.2 The shell assemblage is poorly preserved, with many of the shells having lost some or all of their mantle and inner nacreous layer. Small to large old shells are present and the assemblage does not appear to have been deliberately broken or crushed, although it has undergone post-depositional damage.

5 STATEMENT OF POTENTIAL

5.1 Stratigraphy

5.1.1 This excavation presents a good opportunity to investigate part of a well-preserved Roman roadside settlement which saw very little later disturbance. A combination of stratigraphic analysis alongside the spatial distributions of the artefactual and ecofactual assemblages should provide an understanding of the distribution of different activities within this part of the settlement and the role this settlement played within the wider landscape. The written and drawn elements of the contextual record form the main components of the excavation data and are sufficient to form the basis of the site narrative.

5.1.2 Of particular importance are the numerous Roman sunken-featured buildings, which are not as fully understood as their Anglo-Saxon counterparts. This site therefore offers a rare opportunity to improve current knowledge of this feature type.

5.2 Metalwork

Coins and copper alloy

5.2.1 The large group of coins, ranging in date from the 1st to the 4th centuries, and the predominantly 1st-century brooches will all contribute significantly to the refinement of dating for the individual contexts and for the site as a whole. The evident break in activity suggested by their chronological distribution is probably of significance, and their spatial distribution, including those from topsoil and subsoil (2000, 2001) should be examined, in an attempt to assess any shift in focus within the excavated settlement area. The other copper alloy finds are of limited significance, beyond indicating the presence of individuals using Romanised personal items.

Iron and Lead

5.2.2 The potential for further analysis of the ironwork and lead is relatively limited, since there is little which is of use in dating, and no significant groups which might illustrate economic activities being carried out. The large number of iron nails suggests that wooden structures were built in the area. For the site itself, there is the potential for adding information about the character of the settlement in terms of everyday activities through the presence of tools and other objects.

5.3 Iron slag and ironworking debris

5.3.1 This is a relatively large ironworking assemblage for a rural Romano-British settlement, yet what this actually means can only be calculated once an assessment of the percentage sampling of each iron slag-bearing context/feature has been determined and taken into account. It may be possible by this means of examining the waste to estimate the scale of ironworking carried out on site, and whether this was truly industrial rather than simply craft/repair and maintenance based within one or more dedicated smithy areas. Comparisons using such calculated figures can then be made with other similar-sized/dated settlements within the region.

5.4 Cu-alloy metalworking debris

5.4.1 The small copper alloy working assemblage is an indication of activities carried out within the settlement, particularly those associated with SFB **2246**.

5.5 Flint

5.5.1 This relatively small assemblage has very limited potential to contribute to the research aims of the project. Nonetheless, it does provide evidence for earlier prehistoric activity on the site and includes some relatively closely dated and distinctive pieces (notably a microlith and two arrowheads) and is of some interest in terms of documenting long-term prehistoric activity on the gravel terraces of the River Stort.

5.6 Burnt stone

5.6.1 There is no potential for further analysis or research of the burnt stone owing to the small size of the assemblage and lack of contemporaneity with features.

5.7 Worked stone

5.7.1 Full analysis of the worked stone assemblage alongside refined dating and phasing of the contexts it was recovered from will contribute to our understanding of the trade network this settlement formed part of and the types of activities carried out on site.

5.8 Roman pottery

5.8.1 The pottery recovered from the excavations represents a substantial assemblage, from what is a relatively small excavation area. The pottery suggests that activity began in the decades following the Roman conquest and continued into the later Roman period, although based on the material selected for assessment at this stage, the site peaked during the later 1st-mid/later 2nd century AD.

5.8.2 The pottery provides an important insight into the nature of trade to the site and the range of fabrics and forms certainly highlights roadside sites as having access to more diverse networks. Furthermore, it seems highly likely that the site was also making good use of the river as well as the roads.

5.8.3 In many ways the material is indicative of typical domestic activity, with a coarseware dominated assemblage. However, the sheer quantity of pottery recovered from the site, even when considering the apparent longevity as well as its roadside position, indicates intensive activity akin to urban levels of occupation. The relatively high percentage of sherds with usewear evidence is noteworthy and appears to be higher than those recorded at other site types, indicating activity beyond the normal domestic sphere, potentially providing evidence a commercial aspect.

5.8.4 Certainly, the greatest potential of the pottery is in characterising a pottery assemblage from a Roman site along a major routeway. Furthermore, the potential to explore differences between material deposited in features immediately adjacent to the roadside versus those set further back offers an insight into exploring the functions of different areas of the site.

5.9 Fired clay

5.9.1 This large assemblage of fired clay has the potential to provide further information on the nature of activities carried out on the site and the character of the settlement. Once a final site distribution plot of the fired clay/ daub has been compiled, it will be possible to analyse this assemblage in more detail and to compare the results with the data from across the excavation area and with data from other similar sites.

5.10 Ceramic building material

5.10.1 The survival here of such a large and (relatively) unweathered fragmented assemblage of Roman tile and brick is interesting in that the presence of roof tile implies the existence of moderately high status timber buildings, whilst the abundance of tile brick for the purposes of suspended flooring, and the use of a hypocaust system, suggests the presence of more than one high status building such as a villa or a bathhouse within the near vicinity. The ceramic building material assemblage is therefore important in order to model the nature of the roadside settlement and the buildings within both the excavation area and its environs. Local brick and tile production will be an area of interest at analysis.

5.11 Glass

5.11.1 The Roman assemblage has some potential to aid national, regional or local research objectives, and indicates a level of domestic occupation and the ability of the occupants of the settlement to access glass vessels, presumably by trade. There is also the possibility of the presence of some vessels associated with cremation or burial.

5.12 Worked bone

5.12.1 The worked bone objects do not offer much potential for further analysis or research, although the pack needle contributes to the indicators of trade and commerce taking place at the site.

5.13 Charred plant remains

5.13.1 The plant remains have the potential to add to contribute to the wider understanding of the nature and activities of Roman roadside settlements. It is of particular relevance that few comparable environmental assemblages from previous excavations within this area. This assemblage therefore provides a rare opportunity for a detailed study through identification and quantification of selected assemblages from each phase has the potential to provide clarification and the suggestion of spatial variation within the individual features. SFBs are relatively rare on Roman sites and analysis of their contents could aid interpretation of these features, particularly with regard to a possible function related to cereal processing.

5.13.2 Further analysis of selected assemblages from each of the three principal phases would potentially allow for a more detailed identification of the three wheat varieties; emmer, spelt and bread wheat and their representation within each phase. Bread wheat is not frequently recovered from Roman sites, particularly in the earlier Roman period. The reason for the destruction by burning of such large quantities of grain may

be accidental during controlled drying/hardening of the grain but the tentative evidence of the grain being spoilt needs further investigation.

5.14 Human skeletal remains

5.14.1 Whilst the assemblage of skeletons from the site is not large (10 articulated skeletons, one disarticulated bone: minimum number of individuals represented = 11), it is a valuable addition to the existing body of data for Roman burials in Hertfordshire and further afield. Since it comprises only immature (preterm/neonate/infant) skeletons, the assemblage has the potential to add to our understanding of Roman burial practice and treatment of infants in Hertfordshire and the wider region.

5.14.2 The association of perinatal, neonate and young infant burials with Roman buildings or structures is well documented (*e.g.* Philpott 1991, Smith *et al*. 2018). Whilst hypotheses including infanticide and careless disposal of remains have been proffered (*e.g.* Mays and Eyers 2011) the link between the domestic environment and immature burials would seem to be more complex (Scott 1991, Moore 2009, Millet and Gowland 2015). Contextualising the immature remains identified at Grange Paddocks, specifically discussing how and where they are interred in the use and the abandonment of the sunken-featured buildings and pits, is a clear priority for analysis.

5.15 Faunal remains

5.15.1 There is a high potential for aging data to be gathered from this site with 396 fragments of bone providing fusion data and 179 fragments providing tooth wear data. Biometric measurements are possible for 82 samples with 8 bones having the potential to provide withers height estimates. Sex estimation is possible on 21 fragments.

5.15.2 Overall this assemblage has high potential for providing information on dietary and butchery practice throughout the life of the roadside settlement. By plotting the distribution of butchered bone (including butchery related skeletal elements) as well as gnawed fragments it may be possible to identify differences in waste disposal across the site and explore the functions of different areas.

5.16 Mollusca

5.16.1 The assemblage has little potential to aid local, regional and national research priorities although it does indicate transportation of a marine food source to the site, transported along Stane Street or the river and that it formed an important part of the Roman diet.

5.17 Overall potential

5.17.1 When considered together the stratigraphic data along with the artefacts (in particularly the substantial assemblages of Roman pottery and metalwork and to a lesser extent the metalworking residues, worked stone, fired clay and ceramic building material) and the ecofactual assemblages (in particular the substantial charred plant assemblages and faunal remains) are considered to be of sufficient quality to address the majority of the project's research objectives and to provide a firm base on which to progress an archive report and targeted publication work.

6 UPDATED PROJECT DESIGN

6.1 Reassessment of the evaluation

6.1.1 A number of issues with the 2019 evaluation carried out by Cotswold Archaeological Trust within the development area need to be considered. Presumably, either as a result of on-site methodology or time constraints, the work carried out did not correctly predict the richness of the remains present on the site.

6.1.2 Due to the positioning of the evaluation trenches, only the northern ends of two of them exposed features located in the denser roadside part of the settlement; however, this area should have been exposed sufficiently to illustrate the character of the remains present. It would appear that the finds-rich dark earth/buried soil roadside deposits (assigned to Phase 4 of the excavation results) were entirely removed by machine. In addition, a feature subsequently identified as an SFB seems to have been largely excavated by machine.

6.1.3 Of particular concern is the almost complete absence of metal items within the recovered finds assemblages. Although features were excavated that subsequently produced numerous metal objects during the excavation, only two fragments of copper alloy wire and nine fragments of iron nails were recovered during the evaluation. Even if a metal detector was not utilised, more objects than this would have been anticipated during hand excavation alone. Indeed, during the excavation phase of work, a number of metal objects were recovered from the backfill of the evaluation trenches.

6.1.4 These oversights had an impact on both the excavation and post-excavation programme as they meant that incorrect assumptions were made prior to the commencement of this phase of work, resulting in the fact that unexpected (and unusual) quantities of material were recovered from a relatively small area of excavation.

6.2 Revised research aims

6.2.1 A number of aims were identified in the Written Scheme of Investigation (Drummond-Murray 2019) and reiterated in Section 1.4 in this report. These have been expanded upon and updated below, with reference to regional frameworks (Glazebrook 1997; Brown & Glazebrook 2000; Medlycott 2011).

Establish whether Mesolithic/Neolithic occupation took place on the site or whether these features were isolated occurrences

6.2.2 No features of Mesolithic or Neolithic date were encountered during the excavation. Where flintwork from these periods was recovered it proved to be residual within Roman features. It is suggested that features ascribed to these periods during the evaluation were incorrect identifications, or that these were isolated features.

Establish the limits and nature of the Late Iron Age/Early Roman settlement

6.2.3 No features of Iron Age date were recorded on site and all datable assemblages indicate a later 1st century start date to activity at this site (aside from insignificant

amounts of residual material). It seems reasonable to suggest that at least this part of the settlement was uninhabited prior to the Roman conquest and did not have any earlier origins. The multiple rectilinear plots (excavated and seen in the cropmarks) indicate some degree of organised settlement layout.

6.2.4 If one accepts the apparent post-conquest inception date, location at the junction of routeways and indicators for trade, commerce and transport within the finds assemblage, it is tempting to view the early settlement as having a function linked to communication and supply. The assemblage of militaria is small but suggests some form of military influence/presence as could the two Langdon Down and seven Hod Hill brooches recovered (brooch types often associated with the military). These are themes which will be explored further at analysis.

Seek to establish any zonation within the settlement

6.2.5 A number of distinct areas have already been identified and their associated finds assemblages appear to indicate different functions to separate areas of the site. These preliminary findings suggest that it should be possible to expand upon this during analysis and explore the activities carried out within these areas in more detail.

Explore the decline in Roman activity from the 3rd century onwards

6.2.6 Preliminary results of the excavation appear to confirm the decline of the settlement from the 3rd century onwards. This can be further explored at analysis, although the numbers of 3rd and 4th century coins recovered here and during previous works at Grange Paddocks imply a change of focus or a contraction of the settlement rather than a total abandonment. The suggested 2nd century hiatus in activity recorded to the north of Stane Street during the leisure centre extension has been clearly disproven by this phase of work.

Attempt to date the end of settlement activity

6.2.7 As mentioned above, it may be impossible to definitively answer this question without further investigation of the settlement. During analysis, an attempt can be made to model the development of the Roman town over time and to provide an estimate of the duration of the settlement. It may also be possible to identify a point at which the River Stort declined in importance as a routeway/trade route.

Additional research aims

6.2.8 A number of additional research aims have been identified as a result of the post excavation assessment.

Contribute to the wider understanding of the nature of Roman 'SFBs'

6.2.9 The uncommon building form that was recorded at Grange Paddocks is one that is not yet fully understood. These type of structures are more often associated with the early medieval period, but are becoming increasingly known from Romano-British sites. Examples have been recorded at Gorhambury, St Albans (Neal *et al.* 1990) and Verulamium (Stead and Rigby 1989), while a large number of this type of structure have been on the isle of Thanet, Kent (Hicks 2008), (Andrews *et al*. 2015). This

settlement represents the highest concentration of features of this type and period recorded in Hertfordshire to date and offers the opportunity for further investigation of this type of structure.

Explore the diverse network that the Bishop's Stortford was connected to

6.2.10 Given the position of this settlement at the intersection of two routeways and the large amounts of imported materials recorded, the results of this excavation offer the opportunity to explore in detail the extent of the settlement's relationship to the trade network.

Contribute to the wider understanding of Roman roadside settlements

6.2.11 The site generally has the potential to contribute to the wider understanding of the diverse nature and activities of Roman roadside settlements, especially as this settlement does not appear to have been created on the site of an Iron Age settlement. This poses the question of who exactly was living here: a lack of circular structures on the site might be an indication that this was not the indigenous population, or that the inhabitants were eager to adopt a Romanised lifestyle. The strategic siting of the settlement has already been alluded to in terms of communication and trade but consideration needs to be given to any evidence that this settlement was defended in any way, in a similar way to some other roadside settlements.

6.2.12 The artefactual assemblages and building materials recovered at the site indicate a certain degree of affluence to the settlement, or at least easy access to a wide range of imported products. Can any more be discerned about the nature and function of the high-status buildings present in the nearby vicinity?

6.2.13 *Contribute to our understanding of Roman burial practices and specifically the treatment of infants*

6.2.14 The revised research and archaeology framework for the East of England highlighted the need for a synthesis of Roman cemeteries and burial practices (Medlycott 2011, 48) and the immature burials from Grange Paddocks should form part of this analysis.

6.3 Interfaces

6.3.1 Depending on timescales, it is the intention that the results of this excavation be published alongside any future work conducted by OA East as part of the Grange Paddocks Leisure Centre redevelopment.

6.4 Methods statement

Stratigraphy

6.4.1 Context, finds and environmental data will be analysed using an MS Access database. A full stratigraphic text will be prepared for all features, based on a group matrix and utilising tabulated data where appropriate. Features will be grouped by association where appropriate and described spatially and stratigraphically. The specialist information will be integrated (utilising the site database, GIS and/or CAD software programmes) to aid dating and complete more detailed phasing and spatial

consideration of the site. Final phase plans will be produced and illustrations prepared in Adobe Illustrator.

Illustration

6.4.2 The existing digital plans will be updated with any amended phasing and selected sections will be digitised. Report/publication figures will be generated using Adobe Illustrator. Finds recommended for illustration will be drawn by hand and then digitised or, where appropriate, photography of certain finds-types will be undertaken.

Historic environment research

6.4.3 Research will be undertaken to place the site within its wider context. This will involve consulting the Hertfordshire Historic Environment Record in addition to published and unpublished reports on contemporary sites in the vicinity.

Metalwork

6.4.4 All objects will be stabilised and the Iron objects will be x-rayed. All Roman coins, brooches, bangle fragments, finger rings, toiletry items, tools, weapons and militaria will require cleaning and conservation along with any identifiable objects identified by x-ray. Distribution plots will be prepared for all main object types and at least 64 objects will require illustration. A full report will be included in the full grey literature report.

Iron Slag and ironworking debris

6.4.5 An assessment of the percentage sampling of each iron slag-bearing context/feature will be carried out and distribution plots prepared. The magnetic residues will be examined in more detail to assess the type and % composition of hammerscale present more accurately. Confirmation of the copper 'contamination' element within the iron slag will be verified using pXRF analysis. Six selected samples will be illustrated and the report will be included in the full grey literature report.

Cu-alloy metalworking debris

6.4.6 Semi-quantitative chemical analysis by pXRF will be carried out in order to confirm that this is metalworking linked to tin or tin-leaded bronze rather than copper. Comparisons will then be made with other similar-sized/dated settlements within the region. The report will be included in the full grey literature report.

Flint

6.4.7 Any further worked or burnt flint recovered from the residues of bulk samples will be fully recorded. The assessment will be updated and slightly expanded to produce a full archive report on the assemblage suitable for inclusion in the full excavation report.

Burnt stone

6.4.8 No further work is required on the burnt stone. The report will be included in the full grey literature report.

Worked stone

6.4.9 A more comprehensive interpretation of the existing catalogue inventory of worked stone will be undertaken following more accurate dating of the contexts/ features. Six selected worked stone objects will be illustrated, and distribution plots prepared for the various types of quern and whetstone. The report will be included in the full grey literature report.

Roman Pottery

6.4.10 Approximately 30% of the assemblage has been recorded and, whilst it is recommended that more of the assemblage should be recorded for the grey literature document, it is not necessarily the case that all of the remaining pottery needs to be fully recorded (see Appendix B.7 for further details). Once all of the necessary recording is completed, full analysis including by site phase will be necessary to establish if the apparent peak in activity identified at this stage is a true reflection of the site's chronology. Spatial analysis of the material across site will be carried out including spatial distribution of the pottery with the usewear evidence to see if there are certain areas of the site that may reflect commercial rather than domestic activity. Further work comparing this assemblage to other contemporary assemblages will be undertaken, in particular to other roadside settlements. At least 30 sherds will require illustration and a full report on the assemblage will be included in the full grey literature report.

Fired clay

6.4.11 All categories of fired clay will be plotted in order to properly analyse their distribution and compare to data from other sites. An attempt will be made to further distinguish between different fabric types and relate these to manufacturing method as well to the different sources of clay and temper used. Analysis of fired clay from contexts containing iron slag using pXRF may help to resolve the question of whether or not there is a metallurgical connection. Thin-section slides of the fired clay fabrics will be prepared for examination as a means to better distinguish between the various types and dates. Five pieces have been selected for illustration. The report will be included in the full grey literature report.

Ceramic building material

6.4.12 All categories of tile and brick will be plotted in order to analyse their distribution and compare to data from other sites. Further study of some of the tile will be undertaken, in order to further understand the identified 'flat Roman roof tile' and any as yet unidentified tile and brick. A study of the changes in tile (chiefly tegula) type over the period of the settlement will be undertaken. At least 14 pieces will be illustrated. The report will be included in the full grey literature report.

Glass

6.4.13 The Roman glass will be fully examined and catalogue amended, parallels will be found and comparisons drawn to relevant assemblages. At least one object will be illustrated. The report will be included in the full grey literature report.

Worked bone

6.4.14 No further work is required on the worked bone. All objects will be illustrated and the report will be included in the full grey literature report.

Environmental samples

6.4.15 Of the sixty samples assessed, 14 have produced assemblages of charred plant remains that are considered to be worthy of further analysis. Where additional buckets of unprocessed sample remain, these will be processed to ensure maximum statistical potential. Individual grains, seeds and chaff elements will be counted to assist interpretation of the crop-processing stages represented. Two samples have been taken from a recent watching brief of an adjacent area and will require processing and assessment. While micromorphology is not recommended for the monolith samples taken these will be assessed for pollen survival. The report will be included in the full grey literature report.

Human Skeletal Remains

6.4.16 Full osteological analysis has already been carried out for this assessment. To maximise the value of this assemblage either analysis of aDNA or dental enamel peptides should be undertaken to reliably estimate the sex of the individuals additionally a number of the infants targeted for this analysis should also be sampled for radiocarbon dating. A full analytical report will be included in the grey literature report.

Faunal remains

6.4.17 Full recording will be carried out on the assemblage and the bird and deer species will be identified. The assemblage will be examined spatially to identify areas of butchery across the site and variations between the settlement phases. The assemblage will be compared to similar sites. The report will be included in the full grey literature report.

Mollusca

No further work is required on the mollusca assemblage. The report will be updated to produce a full archive report on the assemblage suitable for inclusion in any full excavation report.

6.5 Publication and dissemination of results

6.5.1 A full grey literature report will be prepared and made available digitally via the OA Library (https://library.thehumanjourney.net/).

6.5.2 It is intended that the results of this excavation should be published within the county journal, Hertfordshire Archaeology (subject to future works undertaken). A publication proposal will be submitted to the journal editor, along with RPS and HHET once the full grey literature report has been completed. In addition, given their significance, a note on the Roman SFBs will be considered for publication in *Britannia*.

6.6 Retention and disposal of finds and environmental evidence

6.6.1 Individual finds specialists have made recommendations at this stage as to which material should be retained or dispersed. The assemblages of burnt stone and mollusca have been recommended for deselection. All metalwork, copper alloy

working debris, pottery, worked flint, worked stone and animal bone should be retained for the archive. Iron working debris, fired clay and ceramic building material assemblages can be considered for deselection following analysis.

6.7 Ownership and archive

6.7.1 The documentary archive will include all site records and is estimated that it will produce two boxes of documents. Some elements of the finds assemblage will be discarded on the recommendations of the individual specialists and the remaining material will be prepared and boxed ready for deposition.

6.7.2 The digital archive will include copies of the reports, digital photographs, figures, plates and CAD and plans, along with a MS access database and GIS data.

6.7.3 OA will retain copyright of all reports and the documentary and digital archive produced in this project. OA will maintain the archive to the standards recommended by the Chartered Institute for Archaeologists (CIfA 2014), the Archaeological Archives Forum (Brown 2011), and any standards specific to the relevant county/museum; the documentary archive has been security copied (if relevant); the finds and documentary archive will be deposited with Bishop's Stortford Museum; the digital archive will be deposited with ADS (if relevant); and that the landowner's permission to donate the finds to this repository has been obtained or will be sought.

7 TEXT RESOURCES AND PROGRAMMING

7.1 Project team structure

7.1.1 The project team is set out in the table below:

Name	Initials	Organisation	Role
Stephen Macaulay	SPM	OA East	Project management
Elizabeth Popescu	EP	OA East	Head of Post-Excavation and Publication
Andrew Greef	AG	OA East	Project Officer/Author
David Brown	DB	OA East	Illustrator
Gillian Greer	GG	OA East	Illustrator
Chris Howard-Davis	CHD	External	Metalwork specialist
Simon Timberlake	ST	External	Materials analysis
Lawrence Billington	LB	OA East	Flintwork specialist
Katie Anderson	KA	External	Roman pottery specialist
Gwladys Monteil	GM	External	Samian specialist
Ian Riddler	IR	External	Worked bone specialist
Rachel Fosberry	RF	OA East	Archaeobotanist
Mary Andrews	MA	OA East	Environmental processing
Mairead Rutherford	MR	OA North	Pollen specialist
Helen Webb	HW	OA South	Human bone specialist
Hayley Foster	HF	OA East	Faunal remains specialist
Natasha Dodwell	ND	OA East	Human bone specialist
Tom Booth	TB	External	aDNA (Crick institute)
Nicholas Stewart	NS	External	DEP (Brighton University)
Zoe Ui Choileain	ZUC	OA East	Faunal remains specialist
Carole Fletcher	CF	OA East	Mollusca specialist
Katherine Hamilton	KH	OA East	Archives Supervisor

Table 10: Project Team

7.2 Task list and programme

7.2.1 Compilation of a final archive report is normally completed within one year of the approval of the PXA & UPD, although the current pandemic is impacting on delivery times. Due to ongoing monitoring and the high likelihood that further remains will be discovered, this timetable may need adjustment when all works on the site are completed.

7.2.2 A task list of further analysis work required for the production of the archive report and subsequent publication is presented in Table 11 below. If further significant remains are discovered during any of the future works relating to the leisure centre redevelopment this task list will be revised.

Task no.	Description	Performed by	Days
Project management			
1	Project management	SPM, EP	8
2	Team meetings	SPM, EP, AG	2

3	Coordinate and liaise with internal and external parties and disseminate information	SPM, AG	3
Stratigraphic analysis			
4	Incorporate evaluation data and the results of any further watching brief	AG	2
5	Review phasing and grouping following full ceramic analysis	AG	2
6	Produce final phasing and grouping and disseminate to all specialists	AG	2
7	Update database and digital plans toreflect any changes and disseminate to relevant specialists	AG	3
8	Create distribution plots of relevant artefacts and ecofacts and disseminate to relevant specialists	AG	3
9	Compile/adapt misc reports which require no further work	AG	1
10	Review and synthesise results of artefactual and ecofactual analysis	AG	2
11	Revise and expand group and phase text	AG	2
12	Compile full stratigraphic text incorporating results of artefactual and ecofactual analysis	AG	6
Artefactual analysis			
13	Metalwork (copper alloy): complete catalogue entries	CHD	6
14	Metalwork (copper alloy): write report	CHD	4
15	Metalwork (Iron): complete catalogue entries	CHD	4
16	Metalwork (Iron): write report	CHD	2
17	Metalwork (Lead):complete catalogue entries	CHD	1
18	Metalwork (Lead): write report	CHD	0.5
19	Metalwork (Coins):complete analysis	TBC	2
20	Metalwork (Coins): write report	TBC	3
21	Iron slag and ironworking debris: Further analysis of assemblage,	ST	1
22	Iron slag and ironworking debris: comparisons and produce full report	ST	2
23	Cu-alloy Metalworking debris: Chemical analysis by pXRF	ST	0.5
24	Cu-alloy Metalworking debris: Comparisons and produce full report	ST	0.5
25	Flint: Record flint from samples, update catalogue and produce full report	LB	0.5

26	Worked stone: Further analysis and produce full report	ST	2/3
27	Pottery: complete recording	KA	26
28	Pottery: full analysis including spatial analysis and comparisons	KA	10
29	Pottery: Samian including stamps	GM	3
30	Pottery: write full report	KA	4
31	Fired Clay: Further analysis	ST	2
32	Fired Clay: Chemical analysis by pXRF	ST	0.5
33	Fired clay: petrographic analysis	ST	0.5
34	Fired clay: Produce full report	ST	1
35	Ceramic building material: further analysis and produce full report	ST	2
36	Glass: Forms to be identified where possible and the existing catalogue amended	TBC	1
37	Glass: Parallels found for any important forms	TBC	0.5
38	Glass: Appropriate analysis and report	TBC	1
39	Worked bone: Produce full report	IR	0.5
Ecofactual analysis			
40	Charred plant remains: Processing of remaining 16 buckets	MA	2
41	Charred plant remains: Analysis of 14 samples	RF	14
42	Charred plant remains: Tabulation, research and report	RF	5
43	Pollen: Pollen preparation	Petrostrat - £30 per sample	- £30 per sample
44	Pollen: Pollen assessment and report	MR	TBC
45	HSR: Radio carbon dates (x5)	SUERC	£1575
46	HSR: aDNA analysis	TB	*Research funded* (TBC)
47	HSR: Dental Enamel Peptide	NS	*c.* £500 (TBC)
48	HSR: Analytical report	ND	2/3
49	Faunal remains: Tooth Wear Recording	HF/ZUC	0.5
50	Faunal remains: Biometric measurements	HF/ZUC	0.5
51	Faunal remains: Detailed identification of bird and deer fragments	HF/ZUC	1
52	Faunal remains: Analysis of material from samples	HF/ZUC	1
53	Faunal Remains: analyse patterns of distribution/spatial analysis	HF/ZUC	1
54	Faunal remains: Full report including comparisons to relevant sites	HF/ZUC	2

55	Mollusca: update and produce full report	CF	1
Research and comparison			
56	Compilation of wide range of HER data to put the site into context	AG	2
57	Research into and comparison with relevant roadside settlements	AG	3
Illustration			
58	Digitise sections	DB	5
59	Incorporate changes to phase plans	DB	2
60	Create discussion figures	DB	2
61	Finds Illustration/photography	GG	28
62	Create final plates	DB	1
Full report writing and illustration			
63	Write archaeological background	AG	2
64	Write discussion and conclusions	AG	4
65	Compile full report illustrations/liaise with illustrators	AG	1
66	Produce report figures	DB	2
67	Check report figures	AG	1
68	Internal edit	EP	3
69	Incorporate internal edits	AG	2
70	Final edit	SPM, EP	1
71	Send to RPS and HHET for approval	SPM	0.25
72	Approval revisions	AG	1
Publication			
73	Produce draft publication	AG	8
74	Select final illustrations/liaise with illustrators	AG, EP, DB	1
75	Produce publication figures	DB	4
76	Internal edit	EP	2.5
77	Incorporate edits	AG	1
78	Final edit	EP	1
79	Send to publisher for refereeing	EP	0.25
80	Post-refereeing revisions	EP	2
81	Copy edit queries	EP	0.5
82	Proof reading	EP	1
Archiving			
83	Oversee archiving	KH	2
84	Compile paper archive	KH	2
85	Archive digital photographs	KH	3
86	Reboxing and cataloguing	KH	15
87	Deposit archive		*c.*£8,190

Table 11: Task list

8 BIBLIOGRAPHY

Albarella, U. and Davis, S.J. 1996. 'Mammals and birds from Launceston Castle, Cornwall: decline in status and the rise of agriculture', *Circaea* 12 (1), 1-156

Alexander, J. and Pullinger, J., 1999 Roman Cambridge: Excavations on Castle Hill 1956-1988, *Proceedings of the Cambridge Antiquarian Society* 88, 1-268

Allen, J.R.L. 2014 Whetstones from Roman Silchester (*Calleva Atrebatum*), North Hampshire: Character, manufacture, provenance and use, *British Archaeological Reports (British Series)* 597, Oxford

Allen, M., Lodwick, L., Brindle, T., Fulford, M., and Smith, A. 2017 (Allen *et al*. 2017). *New Visions of the Countryside of Roman Britain* (Vol. 2)*: The Rural Economy of Roman Britain*. London: Society for the Promotion of Roman Studies, Britannia Monograph Series 30.

AlQahtani, S, 2009 *Atlas of Tooth Development and Eruption*, Queen Mary University of London, Queen Mary and Westfield College, Barts and the London School of Medicine and Dentistry, London

Andrews, P, Booth, P, Fitzpatrick, A &Welsh, K 2015 Digging at the Gateway: Archaeological Landscapes of South Thanet, Vol. 1, The Sites(Oxford Wessex Archaeol Monogr 8), Oxford& Salisbury

Appels, A, and Laycock, S, 2007 *Roman Buckles and Military Fittings*, Witham

Assessment and Research Agenda for the East Midlands. University of Leicester Archaeological Services, School of Archaeology and Ancient History, University of Leicester: 137-60.

Bamford, H M, 1985 Briar Hill. Excavation 1974–1978, Northampton Development Corporation Archaeological Monograph 3. Northampton: Northampton Development Corporation

Barnes, E, 1994 *Developmental Defects of the Axial Skeleton in Paleopathology*, Colorado, University Press of Colorado

Bayley, J, and Butcher, S, 2004 *Roman Brooches in Britain. A technological and typological study based on the Richborough Collection*, Rep Res Cttee Soc Antiq London, **68**, London

Bayley, J, Dungworth, D and Paynter, S 2001 *Archaeometallurgy*. English Heritage: London

Béal, J.- C. and Rodet-Belarbi, I., 2003 Le travail de l'os, du bois de cerf et d'ivoire à Vertillum-Vertault (Côte d'Or), *Bulletin Archéologique et Historique du Chatillonnais* 6, 51-104

Boardman, S., Jones, G., 1990. Experiments on the effects of charring on cereal plant components. Journal of Archaeological Science 17. p 1-11

Boyer, P., 2012. Excavations at the Waggon and Horses, 135 Stansted Road, Bishop's Stortford: An Archaeological Assessment. Pre-Construct Archaeology.

Brickley, M, 2004 Determination of sex from archaeological skeletal material and assessment of parturition, in Brickley, M. and McKinley, J.I. (eds) 2004. *Guidelines to the Standards for Recording Human Remains.* IFA Paper No. 7 British Association for Biological Anthropology and Osteoarchaeology and the Institute of Field Archaeologists, 23-25

Brickley, M, and Buckberry, J, 2017 Undertaking sex assessment, in P D Mitchell and M Brickley (eds), *Updated Guidelines to the Standards for Recording Human Remains*, 33-34, Reading, CIfA

Brickley, M, and McKinley, J, 2004 *Guidelines to the Standards for Recording Human Remains.* IFA Paper No. 7 British Association for Biological Anthropology and Osteoarchaeology and the Institute of Field Archaeologists

Brodribb, G. 1987 Roman Brick and Tile, Alan Sutton Publishing

Brothwell, D, and Zakrzewski, S, 2004 Metric and non-metric studies of archaeological human bone, in M Brickley and J McKinley, *Guidelines to the Standards for Recording Human Remains.* IFA Paper No. 7 British Association for Biological Anthropology and Osteoarchaeology and the Institute of Field Archaeologists, 27-33

Brown, D 2011 *Archaeological archives. A guide to best practice in creation, transfer and curation*, 2nd edition, Archaeological Archives Forum

Buikstra, J E, and Uberlaker, D H, 1994 Standards for Data Collection from Human Skeletal Remains, Arkansas Archaeological Survey Research Series No. 44

Burleigh, G R, 1980 A Roman Inhumation Cemetery, The Tene, Baldock, North Herts, *Hertfordshire's Past* 9, 35–37

Burleigh, G R, 1993 Some Aspects of Burial Types in the Cemeteries of the Romano-British Settlement at Baldock, Hertfordshire, England, in M Struck (ed.), *Römerzeitliche Gräber als Quellen zur Religion, Bevölkerungsstruktur und Sozialgeschichte: Internationale Fachkonferenz vom 18.–20. Februar 1991 im Institut für Vor- und Frühgeschichte der Johannes Gutenberg-Universität Mainz,* Archäologische Schriften 3, 41–49, Mainz, Johannes Gutenberg-Universität Mainz

Burleigh, G R, and Fitzpatrick-Matthews, K J, 2010 *Excavations at Baldock, Hertfordshire, 1978–1994, Volume 1: An Iron Age and Romano-British Cemetery at Wallington Road*, North Herts Museums Archaeology Monograph series, vol. 1, Letchworth Garden City, North

Hertfordshire District Council Museums Service & North Hertfordshire Archaeological Society

Bush, L., 2013. Bishop's Stortford North, Hertfordshire: Phase II Evaluation Report. Oxford Archaeology East.

Butler, C. 2005 *Prehistoric Flintwork*. Tempus. Stroud.

Carneiro, A & Mateiciucpva, I. 2007 Daub fragments and the question of structures, *Varia Archaeologica Hungarica* XX1, 255-285

Cavanagh, N., and Noakes, H. 2009. Grange Paddocks Leisure Centre, Bishop'sStortford, Hertfordshire: Post-Excavation Assessment Report. North Pennines Archaeology.

CIfA, 2014a *Standard and guidance for archaeological excavation*

CIfA, 2014b *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives*

Clarke G. 2020. *The OA East excavations at Whittington Way, Bishop's Stortford Education Zone, Hertfordshire*. OAE unpublished report 2433

Clark, J. G.D. 1934. *Derivative forms of the petit tranchet* in Britain Archaeological Journal 91, 32–58

Cocks, A H 1921 A Romano-British Homestead, in the Hambleden valley, Bucks., *Archaeologia* 71, 141–198

Cool, HEM, 1990 Roman metal hair pins from southern Britain, *Archaeol Journ*, **147**, 148-82

Crank, N., McDonald, T. and Murray, J., 2001. Grange Paddocks, Rye Street, Bishop's Stortford: Archaeological Evaluation.Hertfordshire Archaeological Trust.

Crummy, N., 1983 *The Roman Small Finds from Excavations in Colchester 1971-9*, Colchester Archaeological Report 2, Colchester (Colchester Archaeological Trust)

Crummy, N., 2018 Bone and Antler Objects, in M. Hinman and J. Zant, *Conquering the Claylands: Excavations at Love's Farm, St Neots, Cambridgeshire*, East Anglian Archaeology 165, Cambridge (Oxford Archaeology East), 192-197

Davey, N, 1935 *The Romano-British Cemetery at St Stephen's, near Verulamium*, St Albans and Herts Architectural and Archaeological Society

Deschler-Erb, S., 1998 *Römische Beinartefakte aus Augusta Raurica. Rohmaterial, Technologie, Typologie und Chronologie*, Forschungen in Augst 27, Augst

Doel, P., 1999. Legions Way, 133 Stansted Road, Bishop's Stortford: An Archaeological Excavation Interim. Hertfordshire Archaeological Trust.

Drummond-Murray, J 2019 *Grange Paddocks, Bishop's Stortford Written Scheme of Investigation,* Oxford Archaeology

Evans, C, Mackay, D. and Webley, L. 2008. *Borderlands: The Archaeology of the Addenbrooke's Environs, South Cambridge*, CAU Landscape Archives: New Archaeologies of the Cambridge Region (2). Cambridge Archaeological Unit, Cambridge

Evans, C. with Appleby, G., Lucy, S. & Regan, R. 2013 Process and History: Romano-British Communities at Colne Fen, Earith, *CAU Landscape Archives Series* 2, Cambridge Archaeological Unit, University of Cambridge

Fazekas, I, Gy, and Kósa, F 1978 *Forensic Fetal Osteology*, Akadémiai Kiadó, Budapest

Fell, D., 2002. A Roman Site at Legions Way, Bishop's Stortford, Hertfordshire.

Green. C. 2017 Querns and millstones in Late Iron Age and Roman London and South-East England, Chapter 8 IN: D.Bird *Agriculture and Industry in SE Roman Britain,* Oxbow Books

Greep, S., 1995 Objects of Bone, Antler and Ivory from C. A. T. Sites, in K. Blockley, M. Blockley, P. Blockley, S. S. Frere and S. Stow, *Excavations in the Marlowe Car Park and Surrounding Areas*, The Archaeology of Canterbury 5, Canterbury (Canterbury Archaeological Trust), 1112-1152

Greep, S., 1996 Objects of Worked Bone and Antler, in R. P. J. Jackson and T. W. Potter, *Excavations at Stonea, Cambridgeshire 1980-85,* London (British Museum), 525-538

Griffiths, S. 2014. *Points in Time: The Mesolithic-Neolithic transition and the chronology of late rod microliths in Britain*. Oxford Journal of Archaeology 33 (3), 221-243.

Grimm, J. M., 2003 Untersuchungen an Tierknochen aus der jungbronzezeitlichen Flachsiedlung Rodenkirchen-Hahnenknooper Mühle, Ldkr. Wesermarsch, *Probleme der Küstenforschung im südlichen Nordseegebiet* 28, 185-234

Guiraud, H, 1989 Bagues at anneaux à l'époque Romaine en Gaule, *Gallia*, **46**, 173-211

Hardcastle, B, 2019 *Grange Paddocks Bishop's Stortford Hertfordshire Archaeological Evaluation and Watching Brief*, Cotswold Archaeology

Hartley, B. R., 1957 The Wandlebury Iron Age Hill-Fort: Excavations of 1955-6, *Proceedings of the Cambridge Antiquarian Society* 50, 1-28

Hassan, N A-M, Brown, K, Eyers, J E, Brown, T, and Mays, S 2014 Ancient DNA Study of the Remains of Putative Infanticide Victims from the Yewden Roman Villa site at Hambleden, England, *Journal of Archaeological Science* 43, 192–7

Hattatt, R, 1985, *Iron Age and Roman Brooches*, *a Second Selection of Brooches from the Author's Collection,* Dorset

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

Hefferan, J. 2008 South Oxfordshire Archaeological Group SOAG) Ceramic Building Material Recording, *SOAG Bulletin* no.62

Henig, M, 1974 *A corpus of Roman engraved gemstones from British sites*, Brit Archaeol Rep, Brit Ser, **88**, Oxford

Hicks, A, 2008 The Roman settlement, in Bennett et al 2008 At the great crossroads: prehistoric, Roman and medieval discoveries on the Isle of Thanet, 1994–5, CAT Occas Pap 4, Canterbury

Hillman, G. C. (1984). Interpretation of archaeological plant remains: the application of ethnographic models from Turkey, pp. 1-41 in W. wan Zeist and W. A. Casparie (eds.) Plants and ancient man. Rotterdam: Balkema

Hillson, S. 1992. *Mammal Bones and Teeth: An Introductory Guide to Methods and Identification.* London Institute of Archaeology: University College London

Historic England, 2006 *Management of research projects in the historic environment. The MoRPHE project manager's guide*

Historic England, 2008 *Management of research projects in the historic environment. PPN3: Archaeological excavation*

Jackson, D., 2012.Bishop's Stortford north, Hertfordshire: Archaeological evaluation report.
Jacomet, S. 2006 Identification of cereal remains from archaeological sites. (2nd edition, 2006) IPNA, Universität Basel / Published by the IPAS, Basel University.

Johnston, D. E., 1972 A Roman Building at Chalk, near Gravesend, *Britannia* 3, 112-148

Jones and Sullivan et al 1989 *The Parks Canada Glass Glossary*

King, A. 1978. A comparative survey of bone assemblages from Roman sites in Britain. *Bulletin of the Institute of Archaeology.* (London) 15, 217-32

Lewis, M E, 2004 Endocranial lesions in non-adult skeletons: understanding their aetiology, *International Journal of Osteoarchaeology* 14, 82-97

Lewis, M E, 2007 *The Bioarchaeology of Children. Perspectives from Biological and Forensic Anthropology*, Cambridge, Cambridge University Press

Lewis, M E, 2018 *Paleopathology of Children. Identification of Pathological Conditions in the Human Skeletal Remains of Non-Adults*, London, Academic Press,

Mackreth, DF, 2011 *Brooches in Late Iron Age and Roman Britain* (2 vols), Oxford

Manning, WH, 1985 *Catalogue of the Romano-British Iron Tools, Fittings and Weapons in the British Museum*, London

Mays, S, Brickley, M, and Dodwell, N, 2004 *Human Bones from Archaeological Sites. Guidelines for Producing Assessment Documents and Analytical Reports,* Swindon, English Heritage

Mays, S, and Eyers, J, 2011 Perinatal Infant Death at the Roman Villa site at Hambleden, Buckinghamshire, England, *Journal of Archaeological Science* 38, 1931–8

McKinley, J I, 2004 Compiling a skeletal inventory: disarticulated and co-mingled remains, in M Brickley and J I McKinley (eds), *Guidelines to the Standards for Recording Human Remains*. IFA Paper No. 7 British Association for Biological Anthropology and Osteoarchaeology and the Institute of Field Archaeologists, 14-17

Medlycott, M, 2011 *Research and Archaeology Revisited: A Revised Framework for the East of England*, East Anglian Archaeology Occasional Paper 24, ALGAO East of England

Mikler, H., 1997 *Die römischen Funde aus Bein im Landesmuseum Mainz*, Monographies Instrumentum 1, Montagnac (Éditions Monique Mergoil)

Millett, M., & Gowland, R. (2015). Infant and Child Burial Rites in Roman Britain: A Study from East Yorkshire. *Britannia, 46*, 171-189. doi:10.1017/S0068113X15000100

Mitchell, P D, and Brickley, M, (eds) 2017 *Updated Guidelines to the Standards for Recording Human Remains*, Chartered Institute for Archaeologists (CIfA) and BABAO

Moorrees, C F A, Fanning, E A, and Hunt, E E, 1963 Age variation of formation stages for ten permanent teeth, *Journal of Dental Research* 42, 1490-1502

Neal, D, Wardle, A and Hunn, J 1990, Excavation on the Iron Age, Roman and Medieval Settlement at Gorhambury, St Albans, London: English Heritage.

OAE 2020 Roman Settlement Remains South of Old School Lane, Upware, Cambridgeshire. Oxford Archaeology East, unpublished client report 2406

Partridge, C. 1981. Skeleton Green, A Late Iron Age and Romano-British Site. Britannia Monograph Series No. 2. Society for the Promotion of Roman Studies.

Pearson, T. 2000 Quern Manufacturing at Wharnecliffe Rocks, Sheffield, South Yorkshire, *English Heritage Research Report* AI/20/2000

Perrin, R. 2011. *Guidelines for the Archiving of Roman Pottery.* Study Group for Roman Pottery.

Perring, D. 1999 Houses in Roman Britain, unpublished PhD thesis, University of Leicester March 1999
Philpott, R. 1991: Burial Practices in Roman Britain, BAR British Series 219, Oxford

Pratt, E 2018 *Grange Paddocks Bishop's StortfordHertfordshireArchaeological Desk-Based Assessment,* Cotswold Archaeology

Price, J. and Cottam S. 1998 *Romano-British Glass Vessels: A Handbook* Practical Handbook in Archaeology 14

Riddler, I. D., 2018b *Branches de Mors, Outils de Cordage ou Aiguilles à Nouer?* Cahiers LandArc 29, Samois-sur-Seine

Ron Pinhasi, R, Fernandes, D, Sirak, K, Novak, M, Connell, S, Alpaslan-Roodenberg, S, Gerritsen, F, Moiseyev, V, Gromov, A, Raczky, P, Anders, A, Pietrusewsky, M, Rollefson, G, Jovanovic, M, Trinhhoang, H, Bar-Oz, G, Oxenham, M, Matsumura, M, Hofreiter, M, 2015 Optimal Ancient DNA Yields from the inner ear part of the human petrous bone, PLoS ONE 10 (6), e0129102. doi:10.1371/journal.pone.0129102

Scheuer, L, and Black, S, 2000 *Developmental Juvenile Osteology*, Oxford, Elsevier Academic Press

Schmid, E. 1972. *Atlas of Animal Bones for Prehistorians, Archaeologists and Quaternary Geologists*. Amsterdam-London-New York: Elsevier Publishing Company

Scott, E. 1991: 'Animal and infant burial in Romano-British villas: a revitalization movement', in Garwood, P., Jennings, D., Skeates, R. and Toms, J. (eds), Sacred and Profane, Oxford University Committee for Archaeology Monograph 32, Oxford, 115–21

Shaffrey, R. 2006 *Grinding and Milling: A study of Romano-British rotary quern stones and millstones from Old Red Sandstone*, BAR British Series 409, Archaeopress, Oxford

Sjøvold, T 1984 A report on the heritability of some cranial measurements and non-metric traits, in *Multivariate Statistical Methods in Physical Anthropology* (G, N, van Vark, ed.), 223-246, Reidel, Groningen

Sjøvold, T 1987 Decorated skulls from Hallstatt, Austria: the development of a research project, in *Theoretical Approaches to Artifacts, Settlement and Society* (G Burenhult, A Carlsson, A Hyenstrand and T Sjøvold, eds), 5-21, British Archaeological Reports, International Series, No. 366, British Archaeological Reports (BAR), Oxford

Skoglund, P, Storå, J, Götherström, A, and Jakobsson, M 2012 Accurate sex identification of ancient human remains using DNA shotgun sequencing, *Journal of Archaeological Science* 40, 4477-4482

Smith, A, Allen, M, Brindle, T, Fulford, M, Lodwick, L and Rohnbogner, A *2018 Life and Death in Roman Britain* Britannia Monograph Series No.31

Stace, C., 2010 *New Flora of the British Isles*. Third edition. Cambridge University Press

Stead, I and Rigby, V 1989, Verulamium: the King Harry Lane site, English Heritage Archaeological Report, 12, London: English Heritage in association with British Museum Publications

Stewart, N A, Gerlach, R, Gowland, R, Gron, K J, and Montgomery, J, 2017 Sex determination of human remains from peptides in tooth enamel, *Proceedings of the National Academy of Sciences* 114 (52), 201714926

Summerfield-Hill, C, 2018 *Archaeological Strip, Map and Sample Excavation. Western Half of Building P5, GlaxoSmithKline, Priory Street, Ware, Hertfordshire*, Bedfordshire, KDK Archaeology

Thuet, A., 2007 La Tabletterie du Site Antique du «Multiplex Gaumont » (ancien Garage Citroën) à Amiens (Somme), *Revue Archéologique du Picardie* n° 3/4, 00-00

Torgersen, J H, 1951a The developmental genetics and evolutionary meaning of the metopic suture *American Journal of Physical Anthropology* 9, 193-205

Torgersen, J H, 1951b Hereditary factors in the sutural patterns of the skull *Acta Radiologica* 36, 374-382

Torgersen, J H, 1954 The occiput, the posterior cranial fossa and the cerebellar anatomy, in *Aspects of Cerebellar Anatomy* (J, Jansen and A, Brodal, eds), 396-418, Gundersen, Olso

Van den Bossche, W. 2001 *Antique Glass Bottles Their History and Evolution (1500-1850)*

Van der Veen, M., 1999, The economic value of straw and chaff in arid and temperate zones. *Vegetation History and Archaeobotany* 8, 211-224.

Wallace, L.C. 2015 *The Origin of Roman London*, p.86

Warry, P. 2006 Tegulae: Manufacture, Typology and Use in Roman Britain, *BAR (British Series)* 147, Oxford

Watts, M. 2002 *The Archaeology of Mills and Milling*, Tempus, Stroud, Glos., 160 pp
Wickenden, NP, 1988 Some military bronzes from Trinovantian *civitas*, in ed JC Coulston, *Military equipment and the identity of Roman soldiers. Proceedings of the fourth Military Equipment Conference*, Brit Archaeol Rep, Int Ser, 394, Oxford, 234-57

Webb, H., Dean, B., and Ui Choileain, Z., forthcoming, 'Human skeletal remains', in Lyons, A., *The Archaeology of Itter Crescent and Fane Road, Peterborough: Enclosed Iron Age Settlement to Roman Villa*, OA Monographs

Wilkinson, K.N. and Stevens, C.J. (2003) Environmental archaeology: approaches, techniques and applications. Tempus

Wright, W. J ., 1982.Excavations at Elliott's Yard, Bishop's Stortford. Hertfordshire Archaeology Vol. 8, pp. 78–84.

Zohary, D., Hopf, M. 2000 Domestication of Plants in the Old World – The origin and spread of cultivated plants in West Asia, Europe, and the. Nile Valley. 3rd edition. Oxford University Press

Electronic sources

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

Winder, J.M. 2011 *Oyster Shells from Archaeological Sites A brief illustrated guide to basic processing.* https://oystersetcetera.wordpress.com/2011/03/29/oyster-shells-from-archaeological-sites-a-brief-illustrated-guide-to-basic-processing/ consulted 26/05/2018

Winder, J.M. 2015, Oysters and Other Marine Shells, in M. Atkinson and S.J. Preston *Heybridge: A Late Iron Age and Roman Settlement, Excavations at Elms Farm 1993-5*, Internet Archaeology 40. http://dx.doi.org/10.11141/ia.40.1.winder consulted 26/05/2018

APPENDIX A CONTEXT INVENTORY

Context	Cut	Category	Feature Type	Phase	Group
2000	0	layer	Topsoil	9	2000
2001	0	layer	Subsoil	9	2001
2002	2002	cut	ditch	1	2002
2003	2002	fill	ditch	1	2002
2004	2002	fill	ditch	1	2002
2005	2005	cut	post hole	2	2246
2006	2005	fill	post hole	2	2246
2007	0	layer	layer	4	2007
2008	0	layer	layer	4	2188
2009	2109	fill	pit	1	2109
2010	2109	fill	pit	1	2109
2011	2109	fill	pit	1	2109
2012	2012	cut	ditch	2	2012
2013	2012	fill	ditch	2	2012
2014	2014	cut	ditch	2	2014
2015	2014	fill	ditch	2	2014
2016	2014	fill	ditch	2	2014
2017	2014	fill	ditch	2	2014
2018	2012	fill	ditch	2	2012
2019	2019	cut	ditch	1	2019
2020	2019	fill	ditch	1	2019
2021	2021	cut	ditch	6	2021
2022	2021	fill	ditch	6	2021
2023	2026	fill	pit	2	2026
2024	2026	fill	pit	2	2026
2025	2026	fill	pit	2	2026
2026	2026	cut	pit	2	2026
2027	2029	fill	pit	2	2026
2028	2029	fill	pit	2	2026
2029	2029	cut	pit	2	2026
2030	2030	cut	ditch	2	2014
2031	2030	fill	ditch	2	2014
2032	2030	fill	ditch	2	2014
2033	2033	cut	pit	2	2033
2034	2033	fill	pit	2	2033
2035	2033	fill	pit	2	2033
2036	2033	fill	pit	2	2033
2037	2037	cut	pit	2	2037
2038	2037	fill	pit	2	2037
2039	2037	fill	pit	2	2037

Context	Cut	Category	Feature Type	Phase	Group
2040	2037	fill	pit	1	2514
2041	2037	fill	pit	1	2514
2042	2037	fill	pit	1	2514
2043	2037	fill	pit	1	2514
2044	2037	fill	pit	1	2514
2045	2037	fill	pit	1	2514
2046	0	layer	layer	4	2188
2047	0	layer	layer	4	2188
2048	0	layer	layer	4	2188
2049	2037	fill	pit	1	2514
2050	2050	cut	post hole	3	2050
2051	2050	fill	post hole	3	2050
2052	2052	cut	ditch	1	2052
2053	2052	fill	ditch	1	2052
2054	2052	fill	ditch	1	2052
2055	0	layer	layer	4	2188
2056	0	layer	layer	4	2188
2057	2057	cut	pit	2	2057
2058	2057	fill	pit	2	2057
2059	2057	fill	pit	2	2057
2060	2057	fill	pit	2	2057
2061	2057	fill	pit	2	2057
2062	2057	fill	pit	2	2057
2063	2057	fill	pit	2	2057
2064	2057	fill	pit	2	2057
2065	2971	fill	pit	1	2079
2066	2971	fill	pit	1	2079
2067	2068	fill	pit	2	2026
2068	2068	cut	pit	2	2026
2069	2069	cut	ditch	1	2069
2070	2069	fill	ditch	1	2069
2071	2071	cut	ditch	2	2071
2072	2071	fill	ditch	2	2071
2073	2073	cut	ditch	3	2073
2074	2073	fill	ditch	3	2073
2075	2109	fill	pit	1	2109
2076	2109	fill	pit	1	2109
2077	0	layer	layer	4	2188
2078	2109	fill	pit	1	2109
2079	2079	cut	pit	1	2079
2080	2079	fill	pit	1	2079

Context	Cut	Category	Feature Type	Phase	Group
2081	2081	cut	DITCH	2	2081
2082	2081	fill	DITCH	2	2081
2083	2083	cut	ditch	2	2014
2084	2083	fill	ditch	2	2014
2085	2085	cut	ditch	1	2052
2086	2085	fill	ditch	1	2052
2087	2087	cut	pit	1	2260
2088	2087	fill	pit	1	2260
2089	2087	fill	pit	1	2260
2090	2087	fill	pit	1	2260
2091	2087	fill	pit	1	2260
2092	2087	fill	pit	1	2260
2093	2093	cut	post hole	3	2050
2094	2093	fill	post hole	3	2050
2095	2093	fill	post hole	3	2050
2096	2093	fill	post hole	3	2050
2097	2093	fill	post hole	3	2050
2098		layer	layer	4	2007
2099		layer	layer	4	2007
2100	2100	cut	pit	2	2100
2101	2100	fill	pit	2	2100
2102	2100	fill	pit	2	2100
2103	2100	fill	pit	2	2100
2104	2100	fill	pit	2	2100
2105	2100	fill	pit	2	2100
2106	2106	cut	ditch	3	2073
2107	2106	fill	ditch	3	2073
2108	2108	cut	pit	1	2109
2109	2109	cut	pit	1	2109
2110	2100	fill	pit	2	2100
2111	2111	cut	post hole	2	2111
2112	2111	fill	post hole	2	2111
2113	2113	cut	post hole	2	2111
2114	2113	fill	post hole	2	2111
2115	2115	cut	post hole	2	2111
2116	2115	fill	post hole	2	2111
2117	2117	cut	post hole	3	2117
2118	2117	fill	post hole	3	2117
2119	2119	cut	post hole	3	2117
2120	2119	fill	post hole	3	2117
2121	2121	cut	pit	2	2100

Context	Cut	Category	Feature Type	Phase	Group
2122	2121	fill	pit	2	2100
2123	2121	fill	pit	2	2100
2124	2121	fill	pit	2	2100
2125	2121	fill	pit	2	2100
2126	2121	fill	pit	2	2100
2127	2121	fill	pit	2	2100
2128	2121	fill	pit	2	2100
2129	2121	fill	pit	2	2100
2130	2121	fill	pit	2	2100
2131	2121	fill	pit	2	2100
2132	2121	fill	pit	2	2100
2133	2133	cut	ditch	2	2071
2134	2133	fill	ditch	2	2071
2135	2135	cut	ditch	1	2135
2136	2135	fill	ditch	1	2135
2137	0	layer	layer	4	2188
2138	2138	cut	post hole	1	2138
2139	2138	fill	post hole	1	2138
2140	2138	fill	post hole	1	2138
2141	2141	cut	post hole	2	2111
2142	2141	fill	post hole	2	2111
2143	2143	cut	post hole	2	2111
2144	2143	fill	post hole	2	2111
2145	2145	cut	post hole	2	2111
2146	2145	fill	post hole	2	2111
2147	2147	cut	post hole	3	2147
2148	2147	fill	post hole	3	2147
2149	2149	cut	post hole	3	2050
2150	2149	fill	post hole	3	2050
2151	2151	cut	pit	3	2050
2152	2151	fill	pit	3	2050
2153	2153	cut	post hole	3	2050
2154	2153	fill	post hole	3	2050
2155	2155	cut	post hole	3	2050
2156	2155	fill	post hole	3	2050
2157	0	layer	layer	4	2007
2158	0	layer	layer	4	2007
2159		layer	layer	4	2007
2160	0	layer	layer	4	2007
2161	0	layer	layer	4	2007
2162	0	layer	layer	4	2007

Context	Cut	Category	Feature Type	Phase	Group
2163	0	layer	layer	4	2007
2164	0	layer	layer	4	2007
2165	2165	cut	ditch	2	2165
2166	2165	fill	ditch	2	2165
2167	2165	fill	ditch	2	2165
2168	2168	cut	pit	1	2168
2169	2168	fill	pit	1	2168
2170	2168	fill	pit	1	2168
2171	0	layer	layer	4	2007
2172	2187	fill	skeleton	2	2686
2173	0	layer	layer	4	2188
2174	0	layer	layer	4	2188
2175	0	layer	layer	4	2188
2176	0	layer	layer	4	2176
2177	0	layer	layer	4	2176
2178	0	layer	layer	4	2176
2179	0	layer	layer	4	2176
2180	0	layer	layer	4	2176
2181	0	layer	layer	4	2176
2182	0	layer	layer	4	2176
2183	0	layer	layer	4	2176
2184	0	layer	layer	4	2176
2185		layer	layer	4	2176
2186	2232	fill	pit	2	2686
2187	2187	cut	grave	2	2686
2188	0	layer	layer	4	2188
2189	0	layer	layer	4	2188
2190	0	layer	layer	4	2188
2191	0	layer	layer	4	2188
2192	0	layer	layer	4	2188
2193	2193	cut	pit	2	2193
2194	2393	fill	pit	2	2193
2195	2195	cut	pit	1	2109
2196	2196	cut	pit	3	2196
2197	2196	fill	pit	3	2196
2198	2196	fill	pit	3	2196
2199	0	layer	layer	4	2176
2200	2278	fill	ditch	6	3091
2201	0	layer	layer	4	2007
2202	0	layer	layer	4	2007
2203	0	layer	layer	4	2007

Context	Cut	Category	Feature Type	Phase	Group
2204	0	layer	layer	4	2007
2205		layer	layer	4	2007
2206	0	layer	layer	4	2007
2207	2208	fill	post hole	2	2208
2208	2208	cut	post hole	2	2208
2209	2208	fill	post hole	2	2208
2210	2210	cut	post hole	2	2208
2211	2210	fill	post hole	2	2208
2212	2210	fill	Post hole	2	2208
2213	2196	fill	pit	3	2196
2214	2196	fill	pit	3	2196
2215	2196	fill	pit	3	2196
2216	2196	fill	pit	3	2196
2217	2196	fill	pit	3	2196
2218	2218	cut	ditch	1	2002
2219	2219	cut	ditch	1	2002
2220	2220	cut	ditch	6	2220
2221	2220	fill	ditch	6	2220
2222	0	layer	layer	4	2188
2223	0	layer	layer	4	2188
2224		layer	layer	4	2188
2225	0	layer	layer	4	2188
2226	0	layer	layer	4	2188
2227	0	layer	layer	4	2188
2228	0	layer	layer	4	2188
2229	2229	cut	post hole	2	2208
2230	2229	fill	post hole	2	2208
2231	2231	cut	ditch	3	2291
2232	2232	cut	pit	2	2686
2233	2233	cut	ditch	5	2287
2234	2233	fill	ditch	5	2287
2235	2233	fill	ditch	5	2287
2236	2236	cut	DITCH	1	2002
2237	2236	fill	DITCH	1	2002
2238	2238	cut	DITCH	2	2165
2239	2238	fill	DITCH	2	2165
2240	2240	cut	post hole	3	2050
2241	2240	fill	post hole	3	2050
2242	0	layer	layer	4	2188
2243	2243	cut	ditch	6	3091
2244	2243	fill	ditch	6	3091

Context	Cut	Category	Feature Type	Phase	Group
2245	0	layer	layer	4	2188
2246	2246	cut	SFB	2	2246
2247	2246	fill	SFB	2	2246
2248	2246	fill	SFB	2	2246
2249	2246	fill	SFB	2	2246
2250	2246	fill	SFB	2	2246
2251	2246	fill	SFB	2	2246
2252	2246	fill	SFB	2	2246
2253	2246	fill	SFB	2	2246
2254	2246	fill	SFB	2	2246
2255	2255	cut	ditch	6	2220
2256	2255	fill	ditch	6	2220
2257	2257	cut	post hole	2	2246
2258	2257	fill	post hole	2	2246
2259	2257	fill	post hole	2	2246
2260	2260	cut	post hole	1	2260
2261	2260	fill	post hole	1	2260
2262	2260	fill	post hole	1	2260
2263	2263	cut	post hole	2	2246
2264	2263	fill	post hole	2	2246
2265	2263	fill	post hole	2	2246
2266	2266	cut	post hole	2	2246
2267	2266	fill	post hole	2	2246
2268	2266	fill	post hole	2	2246
2269	2269	cut	structure	2	2246
2270	2269	fill	structure	2	2246
2271	2271	cut	post hole	2	2246
2272	2271	fill	post hole	2	2246
2273	2273	cut	post hole	2	2246
2274	2273	fill	post hole	2	2246
2275	2275	cut	post hole	2	2246
2276	2275	fill	post hole	2	2246
2277	2246	fill	skeleton	2	2246
2278	2278	cut	ditch	6	3091
2279	2279	cut	post hole	5	2285
2280	2279	fill	post hole	5	2285
2281	2281	cut	pit	1	2260
2282	2281	fill	pit	1	2260
2283	2283	cut	ditch	1	2002
2284	2283	fill	ditch	1	2002
2285	2285	cut	post hole	5	2285

Context	Cut	Category	Feature Type	Phase	Group
2286	2285	fill	post hole	5	2285
2287	2287	cut	ditch	5	2287
2288	2287	fill	ditch	5	2287
2289	2289	cut	ditch	5	2289
2290	2289	fill	ditch	5	2289
2291	2291	cut	ditch	1	2069
2292	2291	fill	ditch	1	2069
2293	2293	cut	ditch	2	2071
2294	2293	fill	ditch	2	2071
2295	2293	fill	ditch	2	2071
2296	2296	cut	post hole	2	2246
2297	2296	fill	post hole	2	2246
2298	2298	cut	post hole	2	2246
2299	2298	fill	post hole	2	2246
2300	2300	cut	post hole	2	2246
2301	2300	fill	post hole	2	2246
2302	2302	cut	post hole	2	2246
2303	2302	fill	post hole	2	2246
2304	2304	cut	post hole	3	2304
2305	2304	fill	post hole	3	2304
2306	2306	cut	post hole	3	2050
2307	2306	fill	post hole	3	2050
2308	2308	cut	ditch	3	2308
2309	2308	fill	ditch	3	2308
2310	2310	cut	pit	2	2100
2311	2310	fill	pit	2	2100
2312	2310	fill	pit	2	2100
2313	2313	cut	pit	2	2100
2314	2313	fill	pit	2	2100
2315	2313	fill	pit	2	2100
2316	2313	fill	pit	2	2100
2317	2317	cut	ditch	3	2073
2318	2317	fill	ditch	3	2073
2319	3167	fill	midden deposit	1	2168
2320	2320	cut	ditch	2	2165
2321	2320	fill	ditch	2	2165
2322	2322	cut	post hole	3	2322
2323	2322	fill	post hole	3	2322
2324	2324	cut	post hole	3	2322
2325	2324	fill	post hole	3	2322
2326	2326	cut	post hole	1	2326

Context	Cut	Category	Feature Type	Phase	Group
2327	2326	fill	post hole	1	2326
2328	2328	cut	post hole	1	2326
2329	2328	fill	post hole	1	2326
2330	2330	cut	post hole	1	2326
2331	2330	fill	post hole	1	2326
2332	2332	cut	post hole	1	2326
2333	2332	fill	post hole	1	2326
2334	2334	cut	post hole	3	2322
2335	2334	fill	post hole	3	2322
2336	2336	cut	post hole	1	2326
2337	2336	fill	post hole	1	2326
2338	2338	cut	post hole	1	2326
2339	2338	fill	post hole	1	2326
2340	2340	cut	post hole	1	2326
2341	2340	fill	post hole	1	2326
2342	2342	cut	post hole	1	2326
2343	2342	fill	post hole	1	2326
2344	2344	cut	pit	1	2344
2345	2344	fill	pit	1	2344
2346	2346	cut	pit	1	2344
2347	2346	fill	pit	1	2344
2348	2348	cut	post hole	3	2322
2349	2348	fill	post hole	3	2322
2350	2350	cut	pit	2	2350
2351	2350	fill	pit	2	2350
2352	2350	fill	pit	2	2350
2353	2350	fill	pit	2	2350
2354	2354	cut	post hole	1	2326
2355	2354	fill	post hole	1	2326
2356	2356	cut	post hole	1	2326
2357	2356	fill	post hole	1	2326
2358	2358	cut	pit	1	2344
2359	2358	fill	pit	1	2344
2360	2360	cut	ditch	2	2071
2361	2360	fill	ditch	2	2071
2362	2362	cut	ditch	2	2071
2363	2362	fill	ditch	2	2071
2364	2364	cut	post hole	1	2364
2365	2364	fill	post hole	1	2364
2366	2366	cut	pit	1	2344
2367	2366	fill	pit	1	2344

Context	Cut	Category	Feature Type	Phase	Group
2368	2366	fill	pit	1	2344
2369	2369	cut	pit	3	2322
2370	2369	fill	pit	3	2322
2371	2371	cut	pit	2	2350
2372	2371	fill	pit	2	2350
2373	2371	fill	pit	2	2350
2374	2374	cut	pit	2	2026
2375	2374	fill	pit	2	2026
2376	2374	fill	pit	2	2026
2377	2374	fill	pit	2	2026
2378	2378	cut	pit	3	2378
2379	2378	fill	pit	3	2378
2380	2380	cut	pit	1	2138
2381	2380	fill	pit	1	2138
2382	2380	fill	pit	1	2138
2383	2383	cut	pit	2	2383
2384	2383	fill	pit	2	2383
2385	2385	cut	pit	3	2385
2386	2385	fill	pit	3	2385
2387	2387	cut	pit	2	2111
2388	2387	fill	pit	2	2111
2389	2389	cut	pit	2	2111
2390	2389	fill	pit	2	2111
2391	2391	cut	ditch	3	2073
2392	2391	fill	ditch	3	2073
2393	2393	cut	pit	3	2378
2394	2393	fill	pit	3	2378
2395	2395	cut	ditch	5	2395
2396	2395	fill	ditch	5	2395
2397	2397	cut	pit	2	2350
2398	2397	fill	pit	2	2350
2399	2397	fill	pit	2	2350
2400	0	layer	layer	4	2007
2401	0	layer	layer	4	2007
2402	0	layer	layer	4	2007
2403	0	layer	layer	4	2007
2404	0	layer	layer	4	2007
2405	0	layer	layer	4	2007
2406	0	layer	layer	4	2007
2407	0	layer	layer	4	2007
2408	0	layer	layer	4	2007

Context	Cut	Category	Feature Type	Phase	Group
2409	0	layer	layer	4	2007
2410	0	layer	layer	4	2007
2411	0	layer	layer	4	2007
2412	0	layer	layer	4	2007
2413	0	layer	layer	4	2007
2414	0	layer	layer	4	2007
2415	0	layer	layer	4	2007
2416	0	layer	layer	4	2007
2417	0	layer	layer	4	2007
2418	0	layer	layer	4	2007
2419	0	layer	layer	4	2007
2420	0	layer	layer	4	2007
2421	0	layer	layer	4	2007
2422	0	layer	layer	4	2007
2423	0	layer	layer	4	2007
2424	0	layer	layer	4	2007
2425	0	layer	layer	4	2007
2426	0	layer	layer	4	2007
2427	0	layer	layer	4	2007
2428	0	layer	layer	4	2007
2429	0	layer	layer	4	2007
2430	0	layer	layer	4	2007
2431	0	layer	layer	4	2007
2432	0	layer	layer	4	2007
2433	0	layer	layer	4	2007
2434	0	layer	layer	4	2007
2435	0	layer	layer	4	2007
2436	0	layer	layer	4	2007
2437	0	layer	layer	4	2007
2438	0	layer	layer	4	2007
2439	0	layer	layer	4	2176
2440	0	layer	layer	4	2176
2441	0	layer	layer	4	2176
2442	0	layer	layer	4	2176
2443	0	layer	layer	4	2176
2444	0	layer	layer	4	2176
2445	0	layer	layer	4	2176
2446	0	layer	layer	4	2176
2447	0	layer	layer	4	2176
2448	0	layer	layer	4	2176
2449	0	layer	layer	4	2176

Context	Cut	Category	Feature Type	Phase	Group
2450	0	layer	layer	4	2176
2451	0	layer	layer	4	2176
2452	0	layer	layer	4	2176
2453	0	layer	layer	4	2176
2454	0	layer	layer	4	2176
2455	0	layer	layer	4	2176
2456	0	layer	layer	4	2176
2457	0	layer	layer	4	2176
2458	0	layer	layer	4	2176
2459	0	layer	layer	4	2176
2460	0	layer	layer	4	2176
2461	0	layer	layer	4	2176
2462	0	layer	layer	4	2176
2463	0	layer	layer	4	2188
2464	0	layer	layer	4	2188
2465	0	layer	layer	4	2188
2466	0	layer	layer	4	2188
2467	0	layer	layer	4	2188
2468	0	layer	layer	4	2188
2469	0	layer	layer	4	2188
2470	0	layer	layer	4	2188
2471	0	layer	layer	4	2188
2472	0	layer	layer	4	2188
2473	0	layer	layer	4	2188
2474	0	layer	layer	4	2188
2475	0	layer	layer	4	2188
2476	0	layer	layer	4	2188
2477	0	layer	layer	4	2188
2478	0	layer	layer	4	2188
2479	0	layer	layer	4	2188
2480	0	layer	layer	4	2188
2481	0	layer	layer	4	2188
2482	0	layer	layer	4	2188
2483	0	layer	layer	4	2188
2484	0	layer	layer	4	2188
2485	0	layer	layer	4	2188
2486	0	layer	layer	4	2188
2487	0	layer	layer	4	2188
2488	0	layer	layer	4	2188
2489	0	layer	layer	4	2188
2490	0	layer	layer	4	2188

Context	Cut	Category	Feature Type	Phase	Group
2501	2501	cut	pit	1	2344
2502	2501	fill	pit	1	2344
2503	2501	fill	pit	1	2344
2504	2504	cut	structure	2	2246
2505	2504	fill	SFB	2	2246
2506	2504	fill	SFB	2	2246
2507	2504	fill	SFB	2	2246
2508	2504	fill	SFB	2	2246
2509	2504	fill	SFB	2	2246
2510	2510	cut	post hole	3	2322
2511	2510	fill	post hole	3	2322
2512	2510	fill	post hole	3	2322
2513	0	HSR	skeleton	2	2686
2514	2514	cut	pit	1	2514
2515	2514	fill	pit	1	2514
2516	2516	cut	post hole	3	2147
2517	2516	fill	post hole	3	2147
2518	2518	cut	post hole	3	2147
2519	2518	fill	post hole	3	2147
2520	2520	cut	ditch	6	2021
2521	2520	fill	ditch	6	2021
2522	2522	cut	post hole	3	2147
2523	2522	fill	post hole	3	2147
2524	2524	cut	ditch	1	2524
2525	2524	fill	ditch	1	2524
2526	2526	cut	pit	2	2350
2527	2526	fill	pit	2	2350
2528	2528	cut	pit	1	2344
2529	2528	fill	pit	1	2344
2530	2530	cut	post hole	1	2530
2531	2530	fill	post hole	1	2530
2532	2532	cut	post hole	1	2530
2533	2533	cut	pit	2	2350
2534	2533	fill	pit	2	2350
2535	2535	cut	pit	3	2196
2536	2535	fill	pit	3	2196
2537	2535	fill	pit	3	2196
2538	2538	cut	pit	1	2514
2539	2538	fill	pit	1	2514
2540	2540	cut	post hole	3	2147
2541	2540	fill	post hole	3	2147

Context	Cut	Category	Feature Type	Phase	Group
2542	2542	cut	post hole	3	2542
2543	2542	fill	post hole	3	2542
2544	2544	cut	post hole	1	2530
2545	2544	fill	post hole	1	2530
2546	2546	cut	post hole	1	2530
2547	2546	fill	post hole	1	2530
2548	2548	cut	pit	2	2037
2549	2548	fill	pit	2	2037
2550	2550	cut	pit	2	2037
2551	2550	fill	pit	2	2037
2552	2552	cut	pit	2	2037
2553	2552	fill	pit	2	2037
2554	2554	cut	post hole	3	2542
2555	2554	fill	post hole	3	2542
2556	2556	cut	gully	2	2556
2557	2556	fill	gully	2	2556
2558	2558	cut	pit	2	2558
2559	2558	fill	pit	2	2558
2560	2560	cut	pit	5	2560
2561	2560	fill	pit	5	2560
2562	2562	cut	ditch	1	2562
2563	2562	fill	ditch	1	2562
2564	0	HSR	Skeleton	2	2037
2565	2565	cut	ditch	3	2565
2566	2565	fill	ditch	3	2565
2567	2567	cut	pit	2	2558
2568	2567	fill	pit	2	2558
2569	2569	cut	post hole	1	2569
2570	2569	fill	post hole	1	2569
2571	2571	cut	ditch	3	2565
2572	2571	fill	ditch	3	2565
2573	2573	cut	pit	1	2573
2574	2573	fill	pit	1	2573
2575	2575	cut	ditch	2	2012
2576	2575	fill	ditch	2	2012
2577	2577	cut	ditch	1	2069
2578	2577	fill	ditch	1	2069
2579	2579	cut	pit	2	2037
2580	2579	fill	pit	2	2037
2581	2581	cut	pit	3	2542
2582	2581	fill	pit	3	2542

Context	Cut	Category	Feature Type	Phase	Group
2583	2583	cut	pit	2	2383
2584	2583	fill	pit	2	2383
2585	2583	fill	pit	2	2383
2586	2583	fill	pit	2	2383
2587	0	fill	pit	3	2385
2588	2588	cut	pit	3	2385
2589	2588	fill	pit	3	2385
2590	2588	fill	pit	3	2385
2591	2588	fill	pit	3	2385
2592	2592	cut	pit	1	2138
2593	2592	fill	pit	1	2138
2594	2594	cut	pit	1	2138
2595	2594	fill	pit	1	2138
2596	0	fill	pit	3	2385
2597	2597	cut	pit	3	2385
2598	2597	fill	pit	3	2385
2599	2597	fill	pit	3	2385
2600	2597	fill	pit	3	2385
2601	2601	cut	ditch	2	2071
2602	2601	fill	ditch	2	2071
2603	2603	cut	DITCH	1	2603
2604	2603	fill	DITCH	1	2603
2605	2605	cut	DITCH	2	2081
2606	2605	fill	DITCH	2	2081
2607	2607	cut	pit	5	2560
2608	2607	fill	pit	5	2560
2609	2609	cut	ditch	2	2012
2610	2609	fill	ditch	2	2012
2611	2609	fill	ditch	2	2012
2612	2609	fill	ditch	2	2012
2613	2613	cut	pit	1	2613
2614	2613	fill	pit	1	2613
2615	2615	cut	DITCH	3	2615
2616	2615	fill	DITCH	3	2615
2617	2617	cut	PIT	1	2613
2618	2617	fill	PIT	1	2613
2619	2619	cut	Post hole	3	2619
2620	2619	fill	Post hole	3	2619
2621	2621	cut	Post hole	3	2619
2622	2621	fill	Post hole	3	2619
2623	2623	cut	Post hole	3	2619

Context	Cut	Category	Feature Type	Phase	Group
2624	2623	fill	Post hole	3	2619
2625	2625	cut	DITCH	2	2081
2626	2625	fill	DITCH	2	2081
2627	2627	cut	pit	3	2542
2628	2627	fill	pit	3	2542
2629	2629	cut	pit	1	2514
2630	2629	fill	pit	1	2514
2631	2631	cut	pit	3	2542
2632	2631	fill	pit	3	2542
2633	2633	cut	pit	2	2037
2634	2633	fill	pit	2	2037
2635	2635	cut	post hole	1	2530
2636	2635	fill	post hole	1	2530
2637	2637	cut	post hole	2	2208
2638	2637	fill	post hole	2	2208
2639	2639	cut	post hole	2	2208
2640	2639	fill	post hole	2	2208
2641	2641	cut	ditch	1	2069
2642	2641	fill	ditch	1	2069
2643	2643	cut	ditch	1	2135
2644	2643	fill	ditch	1	2135
2645	2645	cut	pit	2	2383
2646	2645	fill	pit	2	2383
2647	2647	cut	post hole	3	2542
2648	2647	fill	post hole	3	2542
2649	2649	cut	ditch	2	2071
2650	2649	fill	ditch	2	2071
2651	2677	fill	kiln?	2	2057
2652	2652	cut	post hole	1	2530
2653	2652	fill	post hole	1	2530
2654	0	fill	pit	3	2385
2655	2655	cut	ditch	1	2743
2656	2655	fill	ditch	1	2743
2657	2657	cut	pit	2	2057
2658	2657	fill	pit	2	2057
2659	2579	fill	pit	2	2037
2660	2579	fill	pit	2	2037
2661	2579	fill	pit	2	2037
2662	2579	fill	pit	2	2037
2663	2579	fill	pit	2	2037
2664	2579	fill	pit	2	2037

Context	Cut	Category	Feature Type	Phase	Group
2665	2579	fill	pit	2	2037
2666	2579	fill	pit	2	2037
2667	2579	fill	pit	2	2037
2668	2668	cut	pit	2	2037
2669	2668	fill	pit	2	2037
2670	2668	fill	pit	2	2037
2671	2671	cut	ditch	2	2081
2672	2726	fill	ditch	1	2562
2673	2726	fill	ditch	1	2562
2674	2725	fill	pit	5	2560
2675	2671	fill	ditch	2	2081
2676	2671	fill	ditch	2	2081
2677	2677	cut	pit	2	2057
2678	2700	fill	kiln?	2	2057
2679	2677	fill	pit	2	2057
2680	2677	fill	pit	2	2057
2681	2677	fill	pit	2	2057
2682	2681	fill	kiln?	2	2057
2683	2683	cut	grave	2	2686
2684	2683	fill	grave	2	2686
2685	2683	fill	skeleton	2	2686
2686	2686	cut	SFB	2	2686
2687	2686	fill	SFB	2	2686
2688	2686	fill	SFB	2	2686
2689	2689	cut	pit	2	2057
2690	2689	fill	pit	2	2057
2691	2689	fill	pit	2	2057
2692	2692	cut	ditch	2	2012
2693	2692	fill	ditch	2	2012
2694	2694	cut	pit	1	2569
2695	2694	fill	pit	1	2569
2696	2696	cut	pit	1	2569
2697	2696	fill	pit	1	2569
2698	2698	cut	post hole	1	2530
2699	2698	fill	post hole	1	2530
2700	2700	cut	pit	2	2057
2701	2700	fill	pit	2	2057
2702	2700	fill	pit	2	2057
2703	2700	fill	pit	2	2057
2704	2704	cut	ditch	1	2743
2705	2704	fill	ditch	1	2743

Context	Cut	Category	Feature Type	Phase	Group
2706	2706	cut	pit	1	2569
2707	2706	fill	pit	1	2569
2708	2708	cut	pit	2	2708
2709	2708	fill	pit	2	2708
2710	2710	cut	ditch	3	2710
2711	2710	fill	ditch	3	2710
2712	2712	cut	grave	2	2686
2713	2712	fill	skeleton	2	2686
2714	2712	fill	SFB	2	2686
2715	2715	cut	pit	2	2057
2716	2715	fill	pit	2	2057
2717	2717	cut	ditch	1	2743
2718	2717	fill	ditch	1	2743
2719	2719	cut	ditch	2	2719
2720	2720	cut	pit	2	2720
2721	2721	cut	ditch	3	2073
2722	2721	fill	ditch	3	2073
2723	2723	cut	pit	1	2138
2724	2723	fill	pit	1	2138
2725	2725	cut	pit	5	2560
2726	2726	cut	ditch	1	2562
2727	2727	cut	pit	5	2560
2728	2727	fill	pit	5	2560
2729	2727	fill	pit	5	2560
2730	2671	fill	ditch	2	2081
2731	2719	fill	ditch	2	2719
2732	2726	fill	ditch	1	2562
2733	2726	fill	ditch	1	2562
2734	2725	fill	pit	5	2560
2735	2725	fill	pit	5	2560
2736	2720	fill	pit	2	2720
2737	2719	fill	ditch	2	2719
2738	2726	fill	ditch	1	2562
2739	2739	cut	pit	2	2739
2740	2739	fill	pit	2	2739
2741	2741	cut	ditch	1	2743
2742	2741	fill	ditch	1	2743
2743	2743	cut	ditch	1	2743
2744	2743	fill	ditch	1	2743
2745	2745	cut	pit	2	2057
2746	2745	fill	pit	2	2057

Context	Cut	Category	Feature Type	Phase	Group
2747	2745	fill	pit	2	2057
2748	2748	cut	post hole	1	2326
2749	2748	fill	post hole	1	2326
2750	2750	cut	post hole	1	2326
2751	2750	fill	post hole	1	2326
2752	2752	cut	post hole	3	2322
2753	2752	fill	post hole	3	2322
2754	2754	cut	ditch	2	2012
2755	2754	fill	ditch	2	2012
2756	2754	fill	ditch	2	2012
2757	2757	cut	post hole	3	2542
2758	2757	fill	post hole	3	2542
2759	2759	cut	pit	1	2613
2760	2759	fill	pit	1	2613
2761	2761	cut	post hole	2	2761
2762	2761	fill	post hole	2	2761
2763	2763	cut	ditch	2	2071
2764	2763	fill	ditch	2	2071
2765	2763	fill	ditch	2	2071
2766	2766	cut	pit	1	2079
2767	2766	fill	pit	1	2079
2768	2768	cut	post hole	2	2761
2769	2768	fill	post hole	2	2761
2770	2770	cut	post hole	2	2761
2771	2770	fill	post hole	2	2761
2772	2772	cut	post hole	2	2761
2773	2772	fill	post hole	2	2761
2774	2774	cut	post hole	3	2774
2775	2774	fill	post hole	3	2774
2776	2776	cut	post hole	3	2774
2777	2776	fill	post hole	3	2774
2778	2778	cut	post hole	3	2774
2779	2778	fill	post hole	3	2774
2780	2780	cut	post hole	3	2774
2781	2780	fill	post hole	3	2774
2782	2782	cut	post hole	3	2774
2783	2782	fill	post hole	3	2774
2784	2784	cut	post hole	3	2774
2785	2784	fill	post hole	3	2774
2786	2786	cut	post hole	3	2774
2787	2786	fill	post hole	3	2774

Context	Cut	Category	Feature Type	Phase	Group
2788	2788	cut	post hole	3	2774
2789	2788	fill	post hole	3	2774
2790	2790	cut	post hole	3	2774
2791	2790	fill	post hole	3	2774
2792	2792	cut	pit	1	2138
2793	2792	fill	pit	1	2138
2794	2794	cut	pit	1	2138
2795	2794	fill	pit	1	2138
2796	2796	cut	ditch	3	2615
2797	2796	fill	ditch	3	2615
2798	2798	cut	post hole	2	2208
2799	2798	fill	post hole	2	2208
2800	2800	cut	post hole	3	2542
2801	2800	fill	post hole	3	2542
2802	2802	cut	post hole	2	2208
2803	2802	fill	post hole	2	2208
2804	2804	cut	post hole	2	2804
2805	2804	fill	post hole	2	2804
2806	2715	fill	pit	2	2057
2807	2807	cut	pit	2	2350
2808	2807	fill	pit	2	2350
2809	2807	fill	pit	2	2350
2810	2810	cut	pit	3	2196
2811	2810	fill	pit	3	2196
2812	2810	fill	pit	3	2196
2813	2813	cut	pit	3	2196
2814	2813	fill	pit	3	2196
2815	2813	fill	pit	3	2196
2816	2813	fill	pit	3	2196
2817	2817	cut	pit	1	2344
2818	2817	fill	pit	1	2344
2819	2819	cut	DITCH	3	2073
2820	2819	fill	DITCH	3	2073
2821	2821	cut	ditch	3	2615
2822	2821	fill	ditch	3	2615
2823	2823	cut	pit	2	2193
2824	2823	fill	pit	2	2193
2825	2825	cut	pit	3	2825
2826	2825	fill	pit	3	2825
2827	2827	cut	ditch	5	2287
2828	2827	fill	DITCH	5	2287

Context	Cut	Category	Feature Type	Phase	Group
2829	2686	fill	SFB	2	2686
2830	2686	fill	SFB	2	2686
2831	2686	fill	SFB	2	2686
2832	2686	fill	SFB	2	2686
2833	2686	fill	SFB	2	2686
2834	2686	fill	floor surface	2	2686
2835	2686	fill	SFB	2	2686
2836	2836	cut	structure	2	2686
2837	2836	fill	SFB	2	2686
2838	3159	fill	ditch	5	2287
2839	2836	fill	SFB	2	2686
2840	2836	fill	SFB	2	2686
2841	2836	fill	SFB	2	2686
2842	2836	fill	SFB	2	2686
2843	2836	fill	SFB	2	2686
2844	2836	fill	SFB	2	2686
2845	3146	fill	SFB	2	2686
2846	2836	fill	SFB	2	2686
2847	2847	cut	post hole	3	2619
2848	2847	fill	post hole	3	2619
2849	2836	fill	SFB	2	2686
2850	2850	cut	pit	3	2196
2851	2850	fill	pit	3	2196
2852	2852	cut	post hole	2	2111
2853	2852	fill	post hole	2	2111
2854	2854	cut	pit	3	2774
2855	2854	fill	pit	3	2774
2856	2856	cut	pit	5	2560
2857	2856	fill	pit	5	2560
2858	2858	cut	ditch	2	2012
2859	2858	fill	ditch	2	2012
2860	2860	cut	pit	1	2569
2861	2861	cut	pit	1	2569
2862	2862	cut	ditch	2	2012
2863	2862	fill	ditch	2	2012
2864	2864	cut	pit	3	2542
2865	2864	fill	pit	3	2542
2866	2739	fill	pit	2	2739
2867	2739	fill	pit	2	2739
2868	2868	cut	pit	2	2350
2869	2868	fill	pit	2	2350

Context	Cut	Category	Feature Type	Phase	Group
2870	2739	fill	pit	2	2739
2871	2871	cut	ditch	5	2395
2872	2871	fill	ditch	5	2395
2873	2871	fill	ditch	5	2395
2874	2871	fill	ditch	5	2395
2875	2875	cut	pit	1	2573
2876	2875	fill	pit	1	2573
2877	2877	cut	ditch	2	2014
2878	2877	fill	ditch	2	2014
2879	2879	cut	post hole	5	2879
2880	2879	fill	post hole	5	2879
2881	2881	cut	post hole	5	2879
2882	2881	fill	post hole	5	2879
2883	2883	cut	post hole	5	2879
2884	2883	fill	post hole	5	2879
2885	2885	cut	post hole	3	2117
2886	2885	fill	post hole	3	2117
2887	2887	cut	post hole	3	2050
2888	2887	fill	post hole	3	2050
2889	2889	cut	post hole	3	2774
2890	2889	fill	post hole	3	2774
2891	2891	cut	post hole	3	2322
2892	2891	fill	post hole	3	2322
2893	2893	cut	post hole	3	2774
2894	2893	fill	post hole	3	2774
2895	2895	cut	pit	3	2774
2896	2895	fill	pit	3	2774
2897	2897	cut	ditch	3	2615
2898	2897	fill	ditch	3	2615
2899	2899	cut	pit	1	2899
2900	2899	fill	pit	1	2899
2901	2739	fill	pit	2	2739
2902	2902	cut	pit	1	2344
2903	2902	fill	pit	1	2344
2904	2904	cut	pit	2	2904
2905	2904	fill	pit	2	2904
2906	2906	cut	ditch	2	2071
2907	2906	fill	ditch	2	2071
2908	2908	cut	pit	1	2344
2909	2908	fill	pit	1	2344
2910	2910	cut	pit	5	2560

Context	Cut	Category	Feature Type	Phase	Group
2911	2910	fill	pit	5	2560
2912	2912	cut	pit	1	2613
2913	2912	fill	pit	1	2613
2914	2914	cut	post hole	1	2530
2915	2914	fill	post hole	1	2530
2916	2916	cut	post hole	2	2804
2917	2916	fill	post hole	2	2804
2918	2918	cut	post hole	3	2050
2919	2918	fill	post hole	3	2050
2920	2920	cut	post hole	3	2050
2921	2920	fill	post hole	3	2050
2922	2922	cut	post hole	2	2208
2923	2922	fill	post hole	2	2208
2924	2924	cut	post hole	2	2111
2925	2924	fill	post hole	2	2111
2926	2926	cut	post hole	3	2774
2927	2926	fill	post hole	3	2774
2928	2928	cut	post hole	3	2774
2929	2928	fill	post hole	3	2774
2930	2930	cut	post hole	2	2930
2931	2930	fill	post hole	2	2930
2932	2932	cut	post hole	2	2932
2933	2932	fill	post hole	2	2932
2934	2934	cut	post hole	2	2932
2935	2934	fill	post hole	2	2932
2936	2936	cut	post hole	2	2930
2937	2936	fill	post hole	2	2930
2938	2938	cut	post hole	2	2930
2939	2938	fill	post hole	2	2930
2940	2940	cut	post hole	2	2930
2941	2940	fill	post hole	2	2930
2942	2942	cut	post hole	1	2514
2943	2942	fill	post hole	1	2514
2944	2944	cut	post hole	3	2542
2945	2944	fill	post hole	3	2542
2946	2946	cut	post hole	3	2542
2947	2946	fill	post hole	3	2542
2948	2948	cut	post hole	2	2111
2949	2948	fill	post hole	2	2111
2950	2950	cut	post hole	2	2111
2951	2950	fill	post hole	2	2111

Context	Cut	Category	Feature Type	Phase	Group
2952	2952	cut	post hole	5	2879
2953	2952	fill	post hole	5	2879
2954	2954	cut	post hole	3	2117
2955	2954	fill	post hole	3	2117
2956	2956	cut	pit	5	2560
2957	2956	fill	pit	5	2560
2958	2956	fill	pit	5	2560
2959	2959	cut	post hole	5	2879
2960	2959	fill	post hole	5	2879
2961	2961	cut	post hole	3	2147
2962	2961	fill	post hole	3	2147
2963	2963	cut	post hole	3	2619
2964	2963	fill	post hole	3	2619
2965	2965	cut	pit	3	2774
2966	2965	fill	pit	3	2774
2967		void		9	0
2968		void		9	0
2969	2969	cut	pit	1	2344
2970	2969	fill	pit	1	2344
2971	2971	cut	pit	1	2079
2972	3247	fill	pit	1	2168
2973	3247	fill	pit	1	2168
2974	3247	fill	pit	1	2168
2975	3247	fill	pit	1	2168
2976	3247	fill	pit	1	2168
2977	2977	cut	pit	3	2825
2978	2977	fill	pit	3	2825
2979	2979	cut	post hole	1	2979
2980	2979	fill	post hole	1	2979
2981	2981	cut	ditch	2	2981
2982	2981	fill	ditch	2	2981
2983	2983	cut	post hole	1	2979
2984	2983	fill	post hole	1	2979
2985	2985	cut	post hole	1	2326
2986	2985	fill	post hole	1	2326
2987	2987	cut	post hole	1	2326
2988	2987	fill	post hole	1	2326
2989	2989	cut	post hole	3	2989
2990	2989	fill	post hole	3	2989
2991	2991	cut	post hole	1	2326
2992	2991	fill	post hole	1	2326

Context	Cut	Category	Feature Type	Phase	Group
2993	2993	cut	post hole	1	2326
2994	2993	fill	post hole	1	2326
2995	2995	cut	post hole	1	2326
2996	2995	fill	post hole	1	2326
2997	2997	cut	post hole	1	2326
2998	2997	fill	post hole	1	2326
2999	2999	cut	post hole	1	2326
3000	2999	fill	post hole	1	2326
3001	3001	cut	post hole	1	2326
3002	3001	fill	post hole	1	2326
3003	3003	cut	post hole	3	2989
3004	3003	fill	post hole	3	2989
3005	3005	cut	post hole	1	2326
3006	3005	fill	post hole	1	2326
3007	3007	cut	post hole	1	2326
3008	3009	fill	post hole	1	2326
3009	3009	cut	post hole	1	2326
3010	3009	fill	post hole	1	2326
3011	3011	cut	pit	2	2350
3012	3013	fill	ditch	5	2395
3013	3013	cut	ditch	5	2395
3014	3013	fill	ditch	5	2395
3015	3015	cut	post hole	3	2322
3016	3015	fill	post hole	3	2322
3017	3167	fill	structure	1	2168
3018	3018	cut	post hole	1	2979
3019	3018	fill	post hole	1	2979
3020	3146	fill	structure	2	2686
3021	3007	fill	post hole	1	2326
3022	3009	fill	post hole	1	2326
3023	3023	cut	post hole	1	2326
3024	3023	fill	post hole	1	2326
3025	3025	cut	pit	1	2260
3026	3025	fill	pit	1	2260
3027	3027	cut	ditch	2	3027
3028	3027	fill	ditch	2	3027
3029	3027	fill	ditch	2	3027
3030	3030	cut	pit	1	2979
3031	3030	fill	pit	1	2979
3032	3032	cut	pit	1	2979
3033	3032	fill	pit	1	2979

Context	Cut	Category	Feature Type	Phase	Group
3034	3034	cut	pit	3	2825
3035	3034	fill	pit	3	2825
3036	3036	cut	pit	3	2825
3037	3036	fill	pit	3	2825
3038	3038	cut	pit	1	2979
3039	3038	fill	pit	1	2979
3040	3040	cut	post hole	1	2979
3041	3040	fill	post hole	1	2979
3042	3042	cut	post hole	1	2979
3043	3042	fill	post hole	1	2979
3044	3044	cut	post hole	1	2979
3045	3044	fill	post hole	1	2979
3046	3046	cut	pit	1	2979
3047	3046	fill	pit	1	2979
3048	3048	cut	ditch	5	2395
3049	3048	fill	ditch	5	2395
3050	3050	cut	post hole	1	2979
3051	3050	fill	post hole	1	2979
3052	3052	cut	beamslot	2	2686
3053	3052	fill	beamslot	2	2686
3054	3274	fill	pit	3	3093
3055	3247	fill	pit	1	2168
3056	3247	fill	pit	1	2168
3057	3057	cut	post hole	3	2989
3058	3057	fill	post hole	3	2989
3059	3247	fill	pit	1	2168
3060	3060	cut	ditch	3	2308
3061	3060	fill	ditch	3	2308
3062	3062	cut	pit	1	2168
3063	3062	fill	pit	1	2168
3064	3062	fill	pit	1	2168
3065	3062	fill	pit	1	2168
3066	3062	fill	pit	1	2168
3067	3067	cut	ditch	2	2165
3068	3067	fill	ditch	2	2165
3069	3067	fill	ditch	2	2165
3070	3067	fill	ditch	2	2165
3071	3071	cut	ditch	2	2165
3072	3071	fill	ditch	2	2165
3073	3071	fill	ditch	2	2165
3074	3071	fill	ditch	2	2165

Context	Cut	Category	Feature Type	Phase	Group
3075	3071	fill	ditch	2	2165
3076	3076	cut	post hole	3	2304
3077	3076	fill	post hole	3	2304
3078	3078	cut	post hole	5	2285
3079	3078	fill	post hole	5	2285
3080	3251	fill	pit	3	3093
3081	3251	fill	pit	3	3093
3082	0	HSR	skeleton	3	3093
3083	0	HSR	skeleton	3	3093
3084	3258	fill	midden	3	3093
3085	3258	fill	midden deposit	3	3093
3086	3258	fill	midden deposit	3	3093
3087	3258	fill	midden deposit	3	3093
3088	3258	fill	midden deposit	3	3093
3089	3258	fill	floor surface	3	3093
3090	3258	fill	burnt deposit	3	3093
3091	3091	cut	ditch	6	3091
3092	3091	fill	ditch	6	3091
3093	3093	cut	SFB	3	3093
3094	3093	fill	SFB	3	3093
3095	3093	fill	SFB	3	3093
3096	3093	fill	SFB	3	3093
3097	3166	fill	surface (possible floor)	3	3093
3098	3166	fill	SFB	3	3093
3099	3099	cut	pit	3	2825
3100	3099	fill	pit	3	2825
3101	3101	cut	pit	3	2825
3102	3101	fill	pit	3	2825
3103	3101	fill	pit	3	2825
3104	3101	fill	pit	3	2825
3105	3101	fill	pit	3	2825
3106	3101	fill	pit	3	2825
3107	3107	cut	pit	2	2193
3108	3107	fill	pit	2	2193
3109	3107	fill	pit	2	2193
3110	3110	cut	pit	2	2193
3111	3110	fill	pit	2	2193
3112	3112	cut	post hole	3	2322
3113	3112	fill	post hole	3	2322
3114	3114	cut	post hole	3	2322
3115	3114	fill	post hole	3	2322

Context	Cut	Category	Feature Type	Phase	Group
3116	3116	cut	post hole	3	2322
3117	3116	fill	post hole	3	2322
3118	3118	cut	post hole	3	2322
3119	3118	fill	post hole	3	2322
3120	3120	cut	post hole	3	2322
3121	3120	fill	post hole	3	2322
3122	3122	cut	pit	3	2825
3123	3122	fill	pit	3	2825
3124	3122	fill	pit	3	2825
3125	3125	cut	post hole	1	2979
3126	3125	fill	post hole	1	2979
3127	3127	cut	ditch	5	2395
3128	3127	fill	ditch	5	2395
3129	3127	fill	ditch	5	2395
3130	0	fill	layer - floor(?)	3	3093
3131	0	fill	layer	3	3093
3132	0	fill	layer	3	3093
3133	0	fill	layer	3	3093
3134	3134	cut	pit	1	2260
3135	3134	fill	pit	1	2260
3136	3136	cut	ditch	2	2981
3137	3136	fill	ditch	2	2981
3138	3247	fill	SFB	1	2168
3139	3247	fill	SFB	1	2168
3140	3247	fill	SFB	1	2168
3141	3099	fill	pit	3	2825
3142	3101	fill	pit	3	2825
3143	3143	cut	ditch	1	2069
3144	3143	fill	ditch	1	2069
3145	3143	fill	ditch	1	2069
3146	3146	cut	SFB	2	2686
3147	3146	fill	SFB	2	2686
3148	3146	fill	deposit in SFB	2	2686
3149	3146	fill	layer in SFB	2	2686
3150	3146	fill	deposit in SFB	2	2686
3151	3156	fill	post occupation deposit associated with SFB	2	2686
3152	3152	cut	ditch	3	2291
3153	3152	fill	ditch fill	3	2291
3154	3152	fill	ditch fill	3	2291
3155	3152	fill	ditch fill	3	2291
3156	3156	cut	SFB	2	2686

Context	Cut	Category	Feature Type	Phase	Group
3157	3156	fill	SFB	2	2686
3158	3156	fill	SFB	2	2686
3159	3159	cut	ditch	5	2287
3160	3159	fill	ditch	5	2287
3161	3161	cut	ditch	3	2291
3162	3161	fill	ditch fill	3	2291
3163	3161	fill	ditch fill	3	2291
3164	3166	fill	fill of SFB	3	3093
3165	3166	fill	fill of SFB	3	3093
3166	3166	cut	S.F.B.	3	3093
3167	3167	cut	S.F.B. (probable)	1	2168
3168	3167	fill	fill of SFB	1	2168
3169	3167	fill	fill of SFB	1	2168
3170	3167	fill	Fill of SFB	1	2168
3171	3167	fill	fill of SFB	1	2168
3172	3172	cut	post hole	1	2364
3173	3172	fill	post hole	1	2364
3174	3174	cut	post hole	3	2989
3175	3174	fill	post hole	3	2989
3176	3176	cut	pit	3	2322
3177	3176	fill	pit	3	2322
3178	3178	cut	pit	1	2326
3179	3178	fill	pit	1	2326
3180	3180	cut	post hole	3	2322
3181	3180	fill	post hole	3	2322
3182	3182	cut	pit	1	2344
3183	3182	fill	pit	1	2344
3184	3184	cut	pit	2	2193
3185	3184	fill	pit	2	2193
3186	3186	cut	post hole	1	2326
3187	3186	fill	post hole	1	2326
3188	3188	cut	post hole	1	2364
3189	3188	fill	post hole	1	2364
3190	3190	cut	post hole	1	2326
3191	3190	fill	post hole	1	2326
3192	3192	cut	post hole	1	2326
3193	3190	fill	post hole	1	2326
3194	3194	cut	post hole	3	2322
3195	3194	fill	post hole	3	2322
3196	3196	cut	post hole	3	2322
3197	3196	fill	post hole	3	2322

Context	Cut	Category	Feature Type	Phase	Group
3198	3198	cut	ditch	2	2071
3199	3198	fill	ditch	2	2071
3200	3200	cut	pit	1	2326
3201	3200	fill	pit	1	2326
3202	3202	cut	pit	3	2196
3203	3202	fill	pit fill	3	2196
3204	3202	fill	pit fill	3	2196
3205	3202	fill	pit	3	2196
3206	3206	cut	pit	2	2350
3207	3206	fill	pit	2	2350
3208	3206	fill	pit	2	2350
3209	3206	fill	pit	2	2350
3210	3167	fill	fill of pit/SFB?	1	2168
3211	3211	cut	ditch	6	3091
3212	3211	fill	ditch	6	3091
3213	3213	cut	post hole	1	2364
3214	3213	fill	post hole	1	2364
3215	3215	cut	post hole	1	2979
3216	3215	fill	post hole	1	2979
3217	3217	cut	post hole	1	2979
3218	3217	fill	post hole	1	2979
3219	3219	cut	post hole	3	2322
3220	3219	fill	post hole	3	2322
3221	3221	cut	post hole	3	2322
3222	3221	fill	post hole	3	2322
3223	3223	cut	ditch	1	3223
3224	3223	fill	ditch	1	3223
3225	3225	cut	pit	2	2193
3226	3225	fill	pit	2	2193
3227	3227	cut	post hole	1	2326
3228	3227	fill	post hole	1	2326
3229	3229	cut	post hole	1	2326
3230	3229	fill	post hole	1	2326
3231	3231	cut	post hole	3	2322
3232	3231	fill	post hole	3	2322
3233	3233	cut	post hole	3	2322
3234	3233	fill	post hole	3	2322
3235	3235	cut	post hole	1	2326
3236	3235	fill	post hole	1	2326
3237	3237	cut	ditch	1	3223
3238	3237	fill	ditch	1	3223

Context	Cut	Category	Feature Type	Phase	Group
3239	3239	cut	pit	2	2350
3240	3239	fill	pit	2	2350
3241	3251	fill	pit	3	3093
3242		HSR	SKELETON	3	3093
3243	3167	fill	SFB	1	2168
3244	3167	fill	SFB	1	2168
3245	3167	fill	pit	1	2168
3246	3247	fill	SFB	1	2168
3247	3247	cut	SFB	1	2168
3248	2686	fill	SFB	2	2686
3249	3167	fill	SFB	1	2168
3250	3167	fill	SFB	1	2168
3251	3251	cut	structure	3	3093
3252	3251	fill	structure	3	3093
3253	3251	fill	structure	3	3093
3254	3251	fill	structure	3	3093
3255	3251	fill	structure	3	3093
3256	3256	cut	pit	3	3093
3257	3256	fill	pit	3	3093
3258	3258	cut	SFB	3	3093
3259	3258	fill	SFB	3	3093
3260	3258	fill	SFB	3	3093
3261	3258	fill	SFB	3	3093
3262	3258	fill	SFB	3	3093
3263	3258	fill	SFB	3	3093
3264	3258	fill	SFB	3	3093
3265	3258	fill	SFB	3	3093
3266	3258	fill	SFB	3	3093
3267	3258	fill	SFB	3	3093
3268	3258	fill	SFB	3	3093
3269	3258	fill	SFB	3	3093
3270	3270	cut	beamslot	3	3093
3271	3270	fill	beamslot	3	3093
3272	3272	cut	pit	3	3093
3273	3272	fill	pit	3	3093
3274	3274	cut	pit	3	3093
3275	3274	fill	pit	3	3093
3276	3274	fill	pit	3	3093
3277	3251	HSR	SKELETON	3	3093
3278	3167	fill	SFB	1	2168
3279	3279	cut	floor	3	3093

Context	Cut	Category	Feature Type	Phase	Group
3280	3280	layer	Other Layer	9	2000
3281	3281	layer	layer	4	2188
3282	3282	layer	layer	4	2188
3283	3283	layer	layer	4	2176
3284	3284	layer	Other Layer	9	2000
3285	3285	cut	Post hole	1	2979
3286	3285	fill	Secondary Fill	1	2979
3287	3287	cut	Pit	2	2193
3288	3287	fill	pit	2	2193
3289	3289	cut	Pit	2	2350
3290	3289	fill	pit	2	2350
3291	3291	cut	Pit	3	2196
3292	3291	fill	pit	3	2196
3293	3293	cut	Pit	2	2350
3294	3293	fill	pit	2	2350
3295	3295	cut	Pit	2	2350
3296	3295	fill	Secondary Fill	1	2979
3297	3297	cut	Post hole	1	2979
3298	3297	fill	Secondary Fill	1	2979
3299	3299	cut	Post hole	1	2979
3300	3299	fill	Secondary Fill	1	2979
3301	3301	cut	Pit	1	2979
3302	3301	fill	Secondary Fill	1	2979
3303	2583	fill	pit	2	2383
4001	4001	layer	Topsoil	9	2000
4002	4002	layer	Subsoil	9	2001
4003	4003	cut	Pit	6	4003
4004	4003	fill	Secondary Fill	6	4003
4005	4005	cut	Ditch	6	4003
4006	4005	fill	Secondary Fill	6	4003
4007	4007	layer	Alluvial Layer	4	4007
4008	4008	cut	Pit	2	4008
4009	4008	fill	Primary Fill	2	4008
4010	4008	fill	Secondary Fill	2	4008
4011	4008	fill	Primary Fill	2	4008
4012	4008	fill	Secondary Fill	2	4008
4013	4008	fill	Secondary Fill	2	4008
4014	4008	fill	Primary Fill	2	4008
4015	4008	fill	Secondary Fill	2	4008
4016	4016	layer	Alluvial Layer	4	4016
4017	4017	layer	Alluvial Layer	4	4016

Context	Cut	Category	Feature Type	Phase	Group
4018	4018	layer	Alluvial Layer	4	4016
4019	4019	layer	Alluvial Layer	4	4016
4020	2246	layer	Other Layer	2	2246
4021	4021	layer	Alluvial Layer	4	4007
4022	4022	layer	Alluvial Layer	4	4007
4023	4023	layer	Other Layer	4	4007
4024	4024	layer	Alluvial Layer	4	4007
4025	4025	layer	Alluvial Layer	4	4007
4026	4026	layer	Alluvial Layer	4	4007
4027	4027	layer	Alluvial Layer	4	4029
4028	4028	layer	Other Layer	4	4029
4029	4029	layer	other layer	4	4029
4030	4030	cut	Ditch	3	4030
4031	4030	fill	Secondary Fill	3	4030
4032	4032	layer	Alluvial Layer	4	4029
4033	4033	layer	Topsoil	9	2000
4034	4034	layer	Subsoil	9	2001
4035	4035	layer	Other Layer	4	4029
4036	4036	cut	Pit	2	4036
4037	4036	fill	Secondary Fill	2	4036
4038	4038	cut	Ditch	2	4038
4039	4038	fill	Primary Fill	2	4038
4040	4038	fill	Secondary Fill	2	4038
4041	4041	cut	Pit	1	4041
4042	4041	fill	Secondary Fill	1	4041
4043	4043	cut	ditch	2	2071
4044	4043	fill	Secondary Fill	2	2071
4045	4045	cut	ditch	2	2081
4046	4045	fill	Primary Fill	2	2081
4047	4045	fill	Secondary Fill	2	2081
4048	4048	cut	SFB	2	4048
4049	4048	fill	Primary Fill	2	4048
4050	4048	fill	Primary Fill	2	4048
4051	4048	fill	Secondary Fill	2	4048
4052	4048	fill	Primary Fill	2	4048
4053	4048	fill	Secondary Fill	2	4048
4054	4054	cut	Ditch	1	4054
4055	4045	fill	Secondary Fill	1	4054
4056	4056	cut	Ditch	2	4056
4057	4056	fill	Secondary Fill	2	4056
4058	4058	cut	Ditch	3	4058

Context	Cut	Category	Feature Type	Phase	Group
4059	4058	fill	Secondary Fill	3	4058
4060	4060	cut	pit	5	2560
4061	4060	fill	Secondary Fill	5	2560
4062	4062	cut	SFB	2	4062
4063	4062	fill	Secondary Fill	2	4062
4064	4064	cut	SFB	1	4064
4065	4064	fill	Secondary Fill	1	4064
4066	4064	fill	Primary Fill	1	4064
4067	4064	fill	Primary Fill	1	4064
4068	4064	fill	Secondary Fill	1	4064
4069	4069	layer	Other Layer	4	4069
4070	4070	cut	Ditch	2	2719
4071	4070	fill	Secondary Fill	2	2719
4072	4072	cut	ditch	3	2565
4073	4072	fill	Secondary Fill	3	2565
4074	4074	layer	Other Layer	4	4074
4075	4075	layer	Other Layer	4	4074
4076	4076	layer	Alluvial Layer	4	4074
4077	4077	cut	Ditch	2	2014
4078	4077	fill	Secondary Fill	2	2014
4079	4079	cut	Ditch	1	2069
4080	4079	fill	Secondary Fill	1	2069
4081	4081	cut	Pit	2	2057
4082	4081	fill	Secondary Fill	2	2057
4083	4083	cut	Pit	1	2573
4084	4083	fill	Primary Fill	1	2573
4085	4083	fill	Secondary Fill	1	2573
4086	4083	fill	Secondary Fill	1	2573
4100	4100	cut	pit	1	2573
4101	4100	fill	pit	1	2573
4102	4100	fill	pit	1	2573
4103	4100	fill	pit	1	2573
4104	4100	fill	pit	1	2573
4105	4105	cut	pit	2	2057
4106	4105	fill	pit	2	2057
4107	4107	cut	pit	2	2057
4108	4107	fill	pit	2	2057
4109	4107	fill	pit	2	2057
4110	4110	cut	pit	2	2057
4111	4110	fill	pit	2	2057
4112	4112	cut	pit	2	2057

Context	Cut	Category	Feature Type	Phase	Group
4113	4112	fill	pit	2	2057
4114	4114	cut	pit	2	2057
4115	4114	fill	pit	2	2057
4116	4116	cut	ditch	1	2743
4117	4116	fill	ditch	1	2743
4118	4118	cut	ditch	2	2057
4119	4118	fill	ditch	2	2057
4120	0	void	void	9	0
4121	4121	cut	pit	3	2710
4122	4121	fill	pit	3	2710
4123	4123	cut	pit	3	2710
4124	4123	fill	pit	3	2710
4125	4125	cut	ditch	2	2012
4126	4125	fill	ditch	2	2012
4127	4127	cut	pit	1	2569
4128	4127	fill	pit	1	2569
4129	4129	cut	post hole	1	2569
4130	4129	fill	post hole	1	2569
4131	4131	cut	ditch	3	2710
4132	4131	fill	ditch	3	4030
4133	4133	cut	post hole	1	2569
4134	4133	fill	post hole	1	2569
4135	4135	cut	ditch	1	2743
4136	4135	fill	ditch	1	2743
4137	4137	cut	pit	2	2057
4138	4137	fill	pit	2	2057
4139	4139	cut	pit	2	2057
4140	4139	fill	pit	2	2057
4141	4141	cut	pit	1	2613
4142	4141	fill	pit	1	2613
4143	4143	cut	pit	1	2613
4144	4143	fill	pit	1	2613
4145	4145	cut	pit	2	2057
4146	4145	fill	pit	2	2057
4147	4147	cut	pit	1	2613
4148	4147	fill	pit	1	2613
4149	4149	cut	pit	1	2613
4150	4149	fill	pit	1	2613
4151	4151	cut	pit	2	2057
4152	4151	fill	pit	2	2057
4153	4153	cut	pit	1	2613

Context	Cut	Category	Feature Type	Phase	Group
4154	4153	fill	pit	1	2613
4155	4153	fill	pit	1	2613
4156	4153	fill	pit	1	2613
4157	4157	cut	post hole	1	2613
4158	4157	fill	post hole	1	2613
4159	4159	cut	pit	1	2573
4160	4159	fill	pit	1	2573
4161	4161	cut	post hole	1	2573
4162	4161	fill	post hole	1	2573
4163	4163	cut	ditch	2	2012
4164	4163	fill	ditch	2	2012
4165	4165	cut	ditch	6	2021
4166	4165	fill	ditch	6	2021
4167	4167	cut	pit	1	2573
4168	4167	fill	pit	1	2573
4169	4169	cut	pit	1	2573
4170	4169	fill	pit	1	2573
4171	4171	cut	pit	1	2573
4172	4171	fill	pit	1	2573
4173	4173	cut	pit	1	2573
4174	4173	fill	pit	1	2573
4175	4175	cut	pit	1	2573
4176	4175	fill	pit	1	2573
4500	4500	cut	pit	1	2344
4501	4500	fill	pit	1	2344
4502	4500	fill	pit	1	2344
4503	4500	fill	pit	1	2344
4504	4504	cut	pit	1	2344
4505	4504	fill	pit	1	2344
4506	4506	cut	pit	1	2344
4507	4506	fill	pit	1	2344
4508	4508	cut	pit	1	2344
4509	4508	fill	pit	1	2344
4510	4510	cut	ditch	2	2071
4511	4510	fill	ditch	2	2071
4512	4512	cut	ditch	2	2081
4513	4512	fill	ditch	2	2081
4514	4514	cut	ditch	3	4058
4515	4514	fill	ditch	3	4058
4516	4516	cut	pit	2	2720
4517	4516	fill	pit	2	2720

Table 12: Context Inventory

APPENDIX B ARTEFACT ASSESSMENTS

B.1 Metalwork by Chris Howard-Davis

Introduction and methodology

B.1.1 The same methodology was used for all of the classes of find detailed below. Each fragment was examined, assigned a preliminary identification and, where possible, a date range. In the case of ironwork, this was made, and approximate dimensions taken, without benefit of x-radiograph images. Outline spreadsheet entries were created, using Excel 2013 format, and the data recorded (context, small finds number, material, category, type, quantity, condition, completeness, maximum dimensions, outline identification, brief description, x-ray cross-reference, and broad date) serve as the basis for the comments below. The state of preservation (condition) was assessed on a broad four point system (namely poor, fair, good, excellent).

Silver

Quantification:

B.1.2 A single coin initially identified as a silver denarius (SF 163) came from buried soil 2408 (layer 2007, Phase 4) and two medieval hammered coins (SF 251, SF 266) were recovered from subsoil 2001.

Assessment:

B.1.3 The 'denarius' is relatively well-preserved, but appears to have a low silver content, the corrosion products being mainly green, suggesting it to be somewhat debased at best, and probably an additional copper alloy coin. Although obviously Romano-British, it remains undated at this stage.

B.1.4 The two hammered silver coins are both medieval. SF 251 is a halfpenny cut from a short-cross penny of late 12th to late 13th century date. The other coin (SF 266) is extremely worn, and has not, as yet, been identified, but would seem most likely to be of later medieval date, perhaps Tudor. Both are in good condition.

Potential and further work:

B.1.5 All three coins will contribute to the dating evidence for the site. They should be considered alongside the very large group of copper alloy coins.

B.1.6 Conservation requirement: they will require cleaning and conservation before analysis can be completed.

Copper alloy

Quantification:

B.1.7 In all, 339 fragments of copper alloy, probably representing a minimum of 317 artefacts, were submitted for rapid assessment. Most can be described as being in fair

to good condition, and some groups, especially brooches and many of the coins, are in very good condition. Many items have patinated surfaces or a thin coat of corrosion products, but some have partially lost their original patina, and others are encrusted with soil and will require specialist cleaning. A few are completely unidentifiable, being only highly corroded scraps. Few of the objects are regarded as completely unstratified, but a significant proportion (29%) were from topsoil 2000, and subsoil 2001, and can thus be regarded as effectively so.

Assessment:

B.1.8 The group includes 183 coins, many of which are in good or very good condition, although most will require cleaning, before definitive identifications can be made. All are, however, likely to be of Roman date. They appear to fall into two broad groups, one being 1st century issues (often very worn) dating to the period of conquest, the other being mid-late 2nd century (Marcus Aurelius) onwards, with 3rd-century radiates and early-to-mid 4th-century coins of the family of Constantine both well represented. The distribution of coins between broad chronological periods is shown below (Table 13).

Phase	Contexts	Total number
First century	2001, 2295, 2408, 2414, 2452, 2822, 3014, 3241	8
Second century	2001, 2361, 2427, 2451, 2452, 2618	6
First/second century undiff	2001 (4), 2010, 2107, 2349, 2454, 2478, 2505, 2701, 2765 (3), 2900, 2974	16
Third century	2000, 2001 (10), 2107, 2174(2) 2361 (2), 2446, 2449, 2453, 2456, 2458, 2459, 2466, 2467 (3), 2469, 2471, 2474, 2475, 2476, 2486, 2540, 2822, 3020, 3096, 3133, 3280, 3282, 2976	41
Fourth century	2000 (5), 2001 (14), 2080, 2197, 2432, 2456, 2458, 2462, 2463, 2471, 2475, 2478, 2486, 2616, 2722, 3187, 3283	35
Currently illegible	1999 (3), 2000 (3), 2001 (28), 2107, 2188, 2191, 2247,2318, 2363, 2392, 2412, 2449, 2453,2459 (2), 2463, 2468 (2), 2470, 2471, 2473 (2), 2474, 2476, 2480 (2), 2487, 2722 (2), 2765, 2777, 2907, 2974, 3020 (3), 3080, 3086, 3133, 3205, 3280 (2), 3281, 3283 (3), 3284,	77
		183

Table 13: Coin distribution (unless indicated by a figure in brackets, contexts produced single coins)

B.1.9 Considered together, 1st and 2nd-century coins form *c*. 16% of the copper alloy coinage. There is a small group of peri-Conquest coins, with those of Caligula, Claudius, and Nero all present, and a single issue of Vespasian. Together with the considerable number of early to mid-1st century brooches (below) this seems to point to activity at an early stage in the Roman occupation. There are also later 2nd century coins, focussing on Marcus Aurelius, which seem most likely to pertain to the beginning of a later phase of activity.

B.1.10 Although some 42% of the coins are currently unidentified, their general relatively small size, compared to the 1st and 2nd century issues, seems to indicate that most can be placed in the 3rd to 4th centuries. As a further 42% of the coins can be confidently allocated to the same period, it is clear that the main emphasis for coin loss lies in the 3rd and 4th centuries. The 3rd-century radiates include issues of Pertinax, Licinius, Claudius II, Maximian, and Allectus. The 4th-century group

concentrates on issues of Constantine and his family, with several examples of Gloria Exercitus, one commemorating the foundation of Constantinople in AD 330, and one Urbs Roma, minted around the same time.

B.1.11 Most of the other identifiable objects can be regarded as personal items associated with dress. Again these are mainly of broadly Romano-British date, but there is, in addition, one much later item (SF 246) from ditch **2721** (**2073**, Phase 3), an intrusive early to mid-20th-century helmet badge for the Hertfordshire Constabulary. Despite the presence of two medieval silver coins, it does not appear that there are many, if any, other medieval or later metalwork items, although objects of this date cannot be entirely ruled out amongst the less chronologically sensitive material.

B.1.12 There is a reasonably large group of brooches, 18 in all, with another small fragment (SF 570, from fill 2509 of SFB **2504** (**2246**, Phase 2), perhaps from a second Nauheim derivative-type wire brooch, and an oddly configured fragment of wire which has been tentatively identified as the head-loop of a 2nd-century bow brooch (SF 287, from layer 2055 (**2188**, Phase 4)). The brooches are, at this stage, largely uncleaned, and as a consequence, identifications remain provisional, albeit with a high level of certainty. All but two of the group are bow brooches of early-to-mid 1st-century date, with the likely earliest being a Nauheim derivative wire brooch (SF 490) from pit **2675** (**2081** Phase 2)). The two Langton Down types (SF 254, ditch **2763** (**2071**, Phase 2); SF 364, subsoil 2001) are broadly contemporary, as are the seven Hod Hill types (SF 151, buried soil 2401 (Layer 2007, Phase 4); SF 172 and SF 423, subsoil 2001; SF 431, buried soil 2412 (Layer 2007, Phase 4); SF 631, SFB **3166** (**3093**, Phase 3)); SF 639, context 3280 (spoil heap); SF 471, context 3280 (spoil heap) and the five Colchester / Colchester derivative types (SF 301, pit **2715** (Group **2057**, Phase 2); SF 452, SFB **2504** (**2246**, Phase 2), SF 461, buried soil 2419 (layer 2007, Phase 4), SF 484, context 3280 (spoil heap), SF 624, SFB **3166** (**3093**, Phase 3). There is in addition a single Polden Hill type (SF 243, subsoil 2001), which has a date range extending into the late 1st century, whilst the other brooch types have date ranges which end at or about the middle of the century (Bayley and Butcher 2004, Mackreth 2011). All of this group reflects the dating of the early coin group, suggesting some peri-Conquest activity at or very near the site.

B.1.13 There are, in addition, two enamelled plate brooches, a small round example (SF 228) from buried soil 2490 (layer 2188, Phase 4), and a much more ornate example with zoomorphic terminals (SF 170; see, for instance, Hattatt 1985, no 560) from subsoil 2001. Both are of 2nd-century date.

B.1.14 All of these brooches are relatively well preserved, but fine detail, which might aid in refining their date, will only be revealed by cleaning and conservation.

B.1.15 There are, in addition, 11 hairpins (SF 191, buried soil 2451 (Layer 2176, Phase 4), SF 284, pit **2026** (Phase 2); SF 323, pit **2109** (Phase 1); SF 440, SFB **2504** (**2246**, Phase 2); SF 489, ditch **2726** (**2562**, Phase 1); SF 609, SFB **3274** (**3093**, Phase 3); SF 649 and SF 611, SFP **3251** (from both fills 3080 and 3081 SFB **3093**, Phase 3); SF 627, midden layer 3087 (within SFB **3093**, Phase 3); SF 439, buried soil 2408 (layer 2007, Phase 4); SF 632, SFB **3167** (**2168**, Phase 1). Following Cool's 1990 typology, their decorative heads fall

into a generally 2nd-century range, although some types have a date range that spans the entire Roman period (type 2), or the mid-2nd to late 3rd centuries (type 1). One example (SF 489) from ditch **2726** (**2562**, Phase 1), falls into Cool's type 6, which can be more precisely placed in the late 1st to early 2nd century.

B.1.16 Other items of personal adornment and attire are not common in the group. There is a single bangle fragment (SF 241) from enclosure ditch **2014** (Phase 2), and a fragment of wire with one end twisted into a loop (SF 288) from pit **2026** (Group **2026**, Phase 2) could represent a second example. As, for the most part, metal bangles are a late, but very common, fashion item (popular in the 3rd/4th centuries, a period well-represented amongst the coins), this lack is perhaps surprising. There are, in addition, two finger rings: SF 179, from subsoil 2001 is a well-known 2nd-century type (Henig type II (1974); Guiraud 1989, type 2), and SF 207 from buried soil 2479 (2188, Phase 4) falls into Guiraud's somewhat broad type 4 group, with no particular date range.

B.1.17 There are, in addition, two fragmentary copper alloy buckles, (SF 149 buried soil 2400 (2007, Phase 4); SF 328, context 2163 (2007, Phase 4)) neither of which are particularly chronologically sensitive forms and, indeed, it is not impossible that SF 149 is in fact medieval. SF 214, from buried soil 2486 (2188, Phase 4), is a relatively plain embossed buckle or belt plate, probably of Roman date, and SF 413, from subsoil 2001, could be a second example, but is currently largely obscured by deposits of dirt and corrosion.

B.1.18 Personal hygiene is represented by two nail cleaners (SF 261, from enclosure ditch **2291** (**2069**, Phase 1); SF 294, from occupation layer 2099 (2007, Phase 4), two pairs of tweezers (SF 477, from buried soil 2482(2188, Phase 4); SF 573, from SFB **3146** (**2686**, Phase 2), and a possible ear-scoop (SF 496) from SFB **3247** (**2168**, Phase 1); all of which probably derive from personal chatelaine sets. There is a ligula with spatulate head (SF 447) from SFB **2504** (**2246**, Phase 2), the swollen terminal of a probe (SF 271) from subsoil 2001, and three small fragments of mirror (SF 168 from buried soil 2443 (2176, Phase 4); SF 237 from SFB **2246** (Phase 2); SF 430 from buried soil 2459 (2176, Phase 4)).

B.1.19 There is also a very small and somewhat elusive group of military items. A buckle (SF 171) from 2001, is a 1st/2nd century military type with a hinged plate, intended to fasten plate armour (see for instance Appels and Laycock 2007, fig AA6.23), and SF 239, from enclosure ditch **2083** (**2014**, Phase 2) is a single scale from scale mail (lorica squamata). SF 268, from ditch **2601** (**2071**, Phase 2) is a 1st-century apron terminal (Wickenden 1988, fig 3, no 4). A fourth item, a simple lozenge-shaped decorative pendant (SF 415, from subsoil 2001) also seems likely to be of military origin.

B.1.20 Household goods are poorly represented. There are fragments of two metal vessels (SF 178, subsoil 2001; SF 482, context 3282 (layer 2188, Phase 4) and a typical 'paper-clip' mend (SF 269) from pit **2794** (Group **2138**, Phase 1) used to repair minor cracks in such vessels. There are two needles of typical Roman type (SF 623, SFB **3166** (**3093**, Phase 3), SF 651, pit **2026** (Phase 2), and a range of small handles (SF 412, SFB **2246** (Phase 2); SF 642, pit **3206** (Group **2350**, Phase 2), an escutcheon (SF 292, ditch 2081 (fill 2082) and other, less obvious furniture fittings.

B.1.21 A single well-preserved fishhook (SF 391) came from buried soil 2443 (layer 2176, Phase 4), but cannot be dated with any precision. Five plain rings (SF 280, pit **2597** (Group **2385**, Phase 3), SF 443, SFB **2504** (**2246**, Phase 2), SF 486, pit **2655** (Group **2743**, Phase 1); SF 495, SFB **3247** (**2168**, Phase 1); SF 643, SFB **3167** (**2168**, Phase 1) remain undated, but are most likely, considering their provenances, to be Roman.

B.1.22 As this was a rapid assessment, there are a number of less diagnostic items which remain without firm identification; these are described in a spreadsheet held in the project archive and will be revisited during full analysis. In addition, the numerous undiagnostic fragments of sheet or strip, fragmentary and other unidentifiable objects, are all catalogued within the spreadsheet, but not discussed here, as few will be further identified.

Potential and further work:

B.1.23 The large group of coins, ranging in date from the 1st to the 4th centuries, and the predominantly 1st-century brooches will all contribute significantly to the refinement of dating for the individual contexts and for the site as a whole. The evident break in activity suggested by their chronological distribution is probably of significance, and if data are available, their spatial distribution, including those from topsoil and subsoil (2000, 2001) should be examined, in an attempt to assess any shift in focus within the excavated settlement area. The coin assemblage should be compared to other local assemblages. Both groups will require a full report.

B.1.24 The other copper alloy finds are of limited significance, beyond indicating the presence of individuals using Romanised personal items, and it is unlikely that they will sustain significant further analysis, beyond brief catalogue entries and a brief synthetic mention in the appropriate parts of any future report.

B.1.25 Conservation requirement: All of the Roman coins, 183 in total, will require cleaning. The 18 brooches, bangle fragment, possible wire bangle, and two finger rings, and the militaria also will require cleaning and conservation before further analysis can be completed.

Ironwork

Quantification:

B.1.26 In all, 586 fragments of ironwork, probably representing an approximately similar number of artefacts, were examined. Most are in poor condition, and the original forms of most are obscured by a medium-thick covering of corrosion products. In addition, many of the items are fragmentary. At this stage, the assemblage has not been subject to x-radiography, and as a consequence the identifications remain provisional. Dimensions recorded in the outline database/spreadsheet are taken from the corroded objects and serve only to give an approximate indication of size.

Assessment:

B.1.27 Apart from nails, there were very few recognisable objects recovered. They are discussed below in broadly related functional groups.

B.1.28 There is only a very small group associated with personal adornment and clothing. Without x-ray, small fragments of plain iron bow brooches are difficult to recognise with confidence, but four fragments seem to be possible candidates (SF 593, layer 2412 (2007, Phase 4); SF 569 (two objects), midden layer 3017=2319;(within SFB **2168**, Phase 1) SF 562, midden layer 2201 (2007, Phase 4)). All are apparently very simple, and even if correctly identified, unlikely to be dated with any precision. The size of the single elongated D-shaped buckle (SF 600) buried soil 2414 (layer 2007, Phase 4), might suggest that it was possibly from horse tack rather than human attire, and as a common form, it cannot be dated with confidence.

B.1.29 There is, in addition, a small number of hobnails, which were recovered from only six contexts (Table 14). Only 32 nails were recovered in total, which probably represents no more than a single pair of nailed shoes, spread through disparate context-types, and over a wide area. This does not appear to reflect a great presence, in the vicinity, of people likely to be wearing Romanised shoe-styles.

Context		Phase	SF no	Quantity
2061	Fill, pit **2057** (Group **2057**)	2	SF 596	11
2104	Fill, pit **2100** (Group **2100**)	2	SF 586	3
2164	Layer (Group 2007)	4	SF 337	6
2176	Layer (Group 2176)	4	SF 510	1
2400	layer (Group2007)	4	SF 148	2
2505	Fill, SFB **2504** (Group **2246**)	2	SF 719	9
				32

Table 14: Distribution of hobnails

B.1.30 Literacy is possibly represented by a single, provisionally identified stylus (SF 346) from layer 2178 (2176, Phase 4). Other day-to-day activity is represented by a small number of knife blades and blade fragments, of types typically found on Romano-British sites (Table 15).

Context		Phase	SF no	Quantity
2000	Topsoil		SF 419	1
2102	Fill, pit 2100 (Group **2100**)	2	SF 299	1
2103	Fill, pit 2100 (Group **2100**)	2	SF 298	1
2164	Layer (Group 2007)	4	SF 336	1
2416	Buried soil (Group 2007)	4	SF 434	1
2445	Buried soil (Group 2176)	4	SF 133	1
2462	Buried soil (Group 2176)	4	SF 227	1
2507	Fill, SFB 2504 (Group **2246**)	2	SF 524	3
3090	Burning layer (Group **3093**)	3	SF 647	1
3098	Fill, SFB 3166 (Group **3093**)	3	SF 621	1
				12

Table 15: Distribution of blade fragments

B.1.31 SF 133, from buried soil 2445 (2176,Phase 4) is a largely complete whittle-tang blade, as is SF 227, from the same group (deposit 2462), although the blade is appreciably smaller. SF 419, from topsoil 2000, is similar, but its origin in topsoil, means that it is unlikely to be closely dateable. SF 299, from fill 2102 in pit **2100** (Group **2100**, Phase 2), whilst poorly preserved, appears to have a 'break' in the line of the back of the blade, suggesting a relatively late Roman date. A fragment (SF 298) from the same pit (fill 2103) has the typically triangular cross-section of a blade, but is more consistent in width, suggesting a rather elongated blade, perhaps from a scythe. A relatively large object (SF 442), from SFB **2504** (**2246**, Phase 2), has been provisionally identified as a hoe, again representing agricultural activity.

B.1.32 Other, more generalist tools are represented by a well-preserved chisel (SF 127) from subsoil 2001, a probable punch (SF 648) from pit **3251** (SFB **3093**, Phase 3), and a less diagnostic socketed tool (SF 226) from buried soil 2462 (2176, Phase 4). Two fragments (SF 380) from 2205 (2007, Phase 4) have been tentatively identified as wool-comb teeth, which would not be out of place in a generally agricultural context as this settlement appears to be. Although small, SF 614, from midden layer 3084 (within SFB **3093**, Phase 3), resembles a tenter-hook, and might also provide a link with textile production.

B.1.33 Two possible drop handles (SF 342, SF 390), from layer 2164 (2007, Phase 4) and pit **2246** (Phase 2) respectively, seem to represent furniture or, in the case of a third example (SF 409) from the fill (2290) of ditch **2289** (Phase 5), is almost certainly a bucket handle. A relatively large latch-lifter of typically late Iron Age or Romano-British form (Manning 1985, 88) came from layer 2164 (2007, Phase 4, SF 331).

B.1.34 An iron fish-hook (SF 391) from SFB **2246** (Phase 2, fill 2247) reflects the presence of a second example amongst the copper alloy, although it is considerably larger.

B.1.35 A possible, typically Roman linch pin (SF 304) came from pit **2689** (Group **2057**, Phase 2, fill 2691), and is the only obvious object associated with transport.

B.1.36 The remainder of the identifiable items are probably associated, for the most part, with timber structures and their fittings. By far the largest group amongst the ironwork can be identified as nails with relative confidence. A total of 426 fragments were recorded, probably representing approximately the same number of nails, and comprising some 73% of the ironwork by fragment count. Most appear to come from medium-sized hand-forged nails, between 40mm and 80mm in length, and suitable for use in carpentry detail, rather than for joining major timbers. The distribution of nails is tabulated below (Table 16), but it must be noted that the nails themselves are of little use in refining dating, being a long-lived and simple form which changes little through time. Nails were recovered from *c.* 116 contexts, with most producing only between one and three nails, suggesting that their distribution has little significance. In contrast to this, the occupation dump represented by contexts 2202, 2203, 2204, 2205, and 2206 (all layer 2007, Phase 4), produced 61 nails, perhaps arriving in timber from demolished structures, and the fills of SFB **2504** (**2246**, Phase 2, fills 2505, 2507,

2509) produced 64 nails, perhaps, in this case, from the decaying building or wooden items abandoned within it.

Feature	Contexts	Group	Phase	Qty
Layer	2008, 2055, 2056, 2189	2188	4	9
Pit 2109	2010	2109	1	1
Ditch 2014	2017	2014	2	3
Pit 2026	2023	2026	2	1
Pit 2029	2027, 2028	2026	2	2
Pit 2033	2034, 2035	2033	2	2
Pit 2037	2043, 2044	2037	2	3
Layer	2048	2188	4	2
Pit 2067	2063, 2065	2026	1	8
Pit 2195	2076	2109	1	4
Pit 2100	2104	2100	2	1
Layer	2159, 2160, 2162	2007	4	6
Layer	2163, 2164	2007	4	36
Pit 2168	2170	2168	4	1
Skeleton 2187	2172	2007	4	4
Layer	2174	2188	4	11
Layer	2175	2188	4	6
Occupation dump	2178, 2179, 2181, 2182, 2183, 2184	2176	4	12
Layer	2191	2188	4	3
Pit 2393	2194	2193	2	4
Pit 2196	2197	2196	3	1
Layer	2199	2176	4	3
Midden/occupation layer	2202, 2203, 2204, 2205, 2206	2007	4	61
Pit 2233	2234	2287	5	1
SFB 2246	2247, 2248, 2251, 2254	2246	2	17
Posthole 2271	2272	2246	2	1
Skeleton 2246	2277	2246	2	2
Ditch 2289	2290	2289	5	5
Ditch 2317	2318	2073	3	1
Pit 2374	2375	2026	2	1
Buried soil	2406	2007	4	1
Buried soil	2408	2007	4	1
Buried soil	2412	2007	4	1
Buried soil	2414	2007	4	1
Buried soil	2415	2007	4	2
Buried soil	2416	2007	4	1
Buried soil	2417	2007	4	2
Buried soil	2423	2007	4	1
Buried soil	2425	2007	4	1

Buried soil	2428	2007	4	1
Buried soil	2441	2176	4	1
Buried soil	2459	2176	4	2
Buried soil	2483	2188	4	1
Pit 2501	2502	2344	1	1
SFB 2504	2505, 2507, 2509	2246	2	64
Posthole 2530	2530	2530	1	1
Posthole 2532	2532	2530	1	1
Pit 2535	2536	2196	3	2
Pit 2583	2586	2383	2	2
Ditch 2601	2602	2071	2	2
Ditch 2609	2612	2012	2	2
Pit 2579	2662, 2663	2037	2	2
Ditch 2726	2673	2562	1	4
Pit 2725	2674	2560	5	1
Pit 2677	2679	2057	2	1
SFB 2686	2688, 2832	2686	2	2
Pit 2700	2702	2057	2	1
Pit 2727	2729	2560	5	2
Ditch 2671	2730	2081	2	1
Ditch 2796	2797	2615	3	1
Pit 2813	2816	2196	3	1
Ditch 2825	2826	2825	3	2
Layer	2837	2686	2	1
SFB 2836	2843	2686	2	1
Posthole 2912	2913	2613	1	3
Pit 3247	2972, 2974	2186	1	6
Pit 2977	2978	2825	3	1
Layer	3017	2168	1	16
Pit 3274	3054	3093	3	1
Pit 3247	3056, 3059	2168	1	2
Pit 3251	3080, 3081	3093	3	10
Layer	3084	3093	3	7
Layer	3085	3093	3	4
Layer	3086	3093	3	15
Layer	3087	3093	3	7
Layer	3090	3093	3	2
SFB 3093	3096, 3098	3093	3	12
Pit 3101	3102	2825	3	4
Ditch 3136	3137	2981	2	1
SFB 3167	3168	2168	1	3
Pit 3202	3204	2196	3	4
Pit 3206	3208	2350	2	1

Structure 3251	3254	3093	3	1
Feature 3256	3257	3093	3	1
				426

Table 16: Distribution of nails and probable nails (arranged in numerical order of contexts

B.1.37 Other items associated with (presumably) timber structures on the site include small carpenter's dogs (SF 393, SF 534), used to join timbers, from SFB **2246** (Phase 2) and from disuse deposit 3096 in SFB **3093** (Phase 3) respectively. There are, in addition, small T-shaped holdfasts (SF 285, SF 450) from pit 2029 (fill 2028), and SFB 2504 (fill 2509) respectively, which effectively served the same purpose.

B.1.38 A group of fragments of tapering, sometimes perforated strips, occasionally with expanded terminals (SF 382, SF 387, SF 388, SF 451, SF 618), coming from midden layers 2205 and 2204 (layer 2007, Phase 4), pit **2196** (Group **2196**, Phase 3), SFB **2504** (**2246**, Phase 2), and midden layer 3084 (within SFB **3093**, Phase 3), respectively, have been identified as door furniture, being from strap hinges. An L-shaped wall-hook or pintle (SF 286) from midden layer 2206 (layer 2007, Phase 4), could well have been used to suspend a door or shutter.

B.1.39 Single-armed (SF 531, SF 608) and double-armed loops (SF 334, SF 381, SF 448), came from SFB **2504** (**2246**, Phase 2), SFB **3247** (**2168**, Phase 1), layers 2164 and 2205 (layer 2007, Phase 4), and SFB **2504** (**2246**, Phase 2) respectively. They would have been driven into timbers, with the loop used in a number of ways. Some (SF 236: SFB **2246**, Phase 2 (fill 2247); SF 460, buried soil 2469 (layer 2188, Phase 4)) have the loop running through a small ring, and there are two further plain rings (SF 156, buried soil 2423 (2007, Phase 4); SF 487, ditch **2726** (**2562**, Phase 1) were probably used in the same manner.

B.1.40 As is often the case with ironwork, many fragmentary items (*c.* 91) are undiagnostic as to form and date, and will remain unidentified, even after x-ray. Summary details of these fragments can be found in the spreadsheet catalogue.

Potential and further work:

B.1.41 The potential for further analysis is very limited as there is little of use in dating, and no significant groups which might illustrate economic activities carried out on the site. X-radiography is recommended in order to confirm identification, and there is unlikely to be a requirement for conservation, unless the four tentatively identified brooch fragments can be confirmed by x-ray. Brief catalogue entries should be completed, and appropriate mention made in any future report.

Conservation requirement:

B.1.42 The objects are currently well-packed.

Lead

Quantification:

B.1.43 There is a relatively small group of 35 fragments of lead, probably not representing more than 18 objects, one of which is made from lead and iron. Six of these items were recovered subsoil 2001, and might be regarded as effectively unstratified. Condition varies from light corrosion to a moderately thick layer of white corrosion products.

Assessment:

B.1.44 The group consists almost entirely of amorphous fragments of sheet, or solidified droplets (melts); their distribution is shown in Table 17. Indeed, there are only three recogniseable artefacts; a spindle whorl (SF 125), a pot mend (SF 114), and a biconical steelyard weight (SF 177) all from subsoil 2001. Although the biconical weight, which had an inset iron suspension loop, and a long twisted iron link, is a long-lived type, it seems most likely to be of Romano-British date. Lead spindle whorls are unusual in the Roman period, but do appear in small numbers, meaning that there is little reason to assign this example to a later period.

Context		Group	Phase		Qty	SF
2001	Subsoil	-	-	Spindle whorl, pot mend, steelyard weight, melt, object, sheet	6	112, 114, 125, 177, 186, 416, 423
2104	Fill, pit 2100	2100	2	sheet	1	320
2247	Fill, pit 2246	2246	2	sheet	1	238
2251	Fill, pit 2246	2246	2	strip	1	400
2309	Fill, ditch 2308	2308	3	ferrule?	1	234
2400	Buried soil	2007	4	strip	1	150
2407	Buried soil	2007	4	sheet	1	160
2412	Buried soil	2007	4	melt	1	437
2415	Buried soil	2007	4	melt	2	142, 143
2421	Buried soil	2007	4	melt	2	140, 141
2444	Buried soil	2176	4	melt	1	134
2445	Buried soil	2176	4	sheet	1	132
2446	Buried soil	2176	4	sheet	1	136
2468	Buried soil	2188	4	melt	1	455
2469	Buried soil	2188	4	melt	1	457
2486	Buried soil	2188	4	melt	1	472
2507	Fill, SFB 2504	2246	2	sheet	1	529
2600	Fill, pit 2597	2385	3	sheet	1	308
2974	Fill, pit 3247	2168	1	sheet	1	571
3059	Fill, pit 3247	2168	1	melt	1	710
3168	Fill, SFB 3167	2168	1	melt	1	644

Table 17: Distribution of lead artefacts from the site.

Conservation requirement

Silver	
Coins	All
Copper alloy	
Coins	All
Brooches	Sfs 151, 170, 172, 243, 254, 228, 301, 364, 423, 431, 452, 461, 471, 484, 490, 624, 631, 639
Bangles	Sfs 241, 288
Pins	Sfs 191, 284, 323, 439, 440, 489, 609, 611, 627, 632, 649
Finger rings	Sfs 179, 207
Buckle	Sfs 149, 214

Toilet implements	Sfs 261, 294, 447, 477, 496, 573
Militaria	Sfs 171, 239, 268, 415,
Other	Sfs 292, 391, 412, 482, 623, 642, 651
Ironwork	
Various*	Sfs 127, 133, 227, 304, 342, 390, 391, 442, 648
Lead	None

*Table 18: Conservation requirement (*This might increase dependent on the recognition of other significant items from the proposed x-rays)*

Illustration requirement

B.1.45 Some objects can probably be illustrated with modified digital images rather than line drawings.

Copper alloy	
Brooches	Sfs 151, 170, 172, 243, 254, 228, 301, 364, 423, 431, 452, 461, 471, 484, 490, 624, 631, 639
Bangles	Sfs 241, 288
Pins	Sfs 191, 284, 323, 439, 440, 489, 609, 611, 627, 632, 649
Finger rings	Sfs 179, 207
Buckle	Sfs 149, 214
Toilet implements	Sfs 261, 294, 447, 477, 496, 573
Militaria	Sfs 171, 239, 268, 415,
Other	Sfs 292, 391, 412, 482, 623, 642, 651
Ironwork	
Various*	Sfs 127, 133, 227, 304, 331, 342, 390, 391, 442, 648
Lead	Sfs 125, 177

*Table 19: Illustration requirement (*This might increase dependent on the recognition of other significant items from the proposed x-rays)*

B.2 Iron slag and ironworking debris by Simon Timberlake

Introduction

B.2.1 A total of 12.35 kg (137+ pieces) of iron slag and ironworking debris was recovered and examined from this site. All of the material was from secondary iron smithing, and mostly forging work. Two features in particular (pit **2121** and ditch **2726**) had large amounts of ironworking slag/debris associated with them. All of this industrial activity appeared to be Roman in date, most of it dating to the 2nd-3rd centuries AD.

B.2.2 Just a tiny amount of iron slag with some copper contamination in it was noted (contexts 2034 and 2673 (8)). However, these pieces were associated with iron smithing rather than bronze working.

B.2.3 A full inventory of all the iron slag/ ironworking debris recovered from the site is provided within Table 20.

Methodology

B.2.4 The iron slag was identified visually using an illuminated x10 magnifying lens and some of the fine hammerscale residues examined under a binocular microscope. A dropper bottle containing dilute hydrochloric acid was used to confirm the presence or absence of calcite in the rock. In all cases, the degree of magnetisation indicating the presence of wustite or free iron within the slag was assessed using a magnet (scale 0-4).

Description of the iron slag

B.2.5 The 12,352g of slag pieces examined consisted of 137 recorded pieces together with 60 sample bags containing various sieved residue fractions (from the environmental bulk samples) with in some cases hundreds if not thousands of tiny slag pieces mostly consisting of hammerscale (dominant), fragmented slag droplets, vitrified clay, broken-up vitrified hearth lining (VHL) plus crumbs of fired clay and sand.

B.2.6 For the purposes of this assessment it could be determined that iron slag/ ironworking debris was recorded from 76 different contexts; the largest amounts of which came from contexts 2122 (2336g) and 2124 (758g) (all from a large pit **2121** dating to the 2nd century AD (Phase 2)), from the fills of a ditch (**2726**) dating to the 2nd-3rd century AD (Phase 3) (i.e.contexts [2672] (572g) and [2673] (1452g)), with slightly smaller amounts coming from contexts 2082 (**2081**, 522g) and 2034 (**2033**, 1316g), the latter also dating to the 2nd century AD (Phase 2).

B.2.7 The most visible and identifiable product of iron smithing activities is the smithing hearth base (SHB) composed of re-melted hammerscale, smithing fragments and scraps of iron, and pieces of vitrified clay lining. The amount of wustite or free iron present in these varied considerably. There was also a considerable variation in size amongst the 50 SHBs and six proto-SHBs – between 35mm and 115mm in diameter and 15mm to 65mm deep and between 29g and 735g in weight. Most were quite irregular in shape, although the typical round plano-convex form was common, although more flattened plano-discoid forms perhaps reflect shallower flat-bottomed

clay-lined smithing hearths. By far the largest examples though were bi-convex, suggesting perhaps more extended and heavier smithing episodes, whilst composite SHBs imply the non-removal of these from a hearth and the formation of another smithing base on top, with little indication of a break in activity.

B.2.8 Some 9244g (x52) SHBs and 326g of proto-SHB were recorded from most of the slag-bearing contexts. This compares with 1023g (x20+) of amorphous slag smithing lumps (SSL) which includes re-melted drops and fragments from the SHBs as well as slag that had become accreted to the tuyere (air blast pipe). Broken-up fragments of the thin (5-10mm thick) vitrified clay hearth linings (VHL) of these smithing hearths are recognisable by their internal glassy surfaces and fired and oxidised red clay exteriors. Some 650g of this was recorded from some 12 different slag-bearing contexts alongside 303g of highly vitrified clay (VC), the latter consisting of lumps of clay broken off the furnace sides, ceramic *etc*. Fragments of iron waste embedded in slag as a result of the hammering of iron pieces, or from the loss of nails or other objects into the hearth, consisted of another 150g of this ironworking debris, although this is likely to be a considerable underestimate of the true amount.

B.2.9 Hammerscale was only identified within the residues of the environmental bulk samples taken from on or close to the highest density of iron slag finds. The highest recoveries of loose hammerscale do not necessarily always correspond to the contexts associated with the hearths, as inevitably the hammerscale itself survives upon the floor surfaces of the smithy, and not within the hearth, but in some cases is dumped along with the other ironworking waste into pits, and sometimes washed into nearby ditch fills. Some 577g of the larger platy hammerscale (4mm+) was recovered from some half a dozen features, whilst the finer flaky hammerscale (0.5mm – 4mm) was more widespread in its distribution, and recorded from 30 or so features, but in much smaller amounts (total 67.28g). Platy or flaky hammerscale is characteristic of forging activity, whilst spheroidal hammerscale might be a product of the forge-welding of iron and the use of quartz sand to prevent the oxidation of the much hotter metal (Bayley *et al.* 2001). However, the amount of spheroidal hammerscale in all the magnetic residues from Grange Paddocks never exceeded 10%, and for this reason it is suggested that the ironworking, for the most part, represented simple forging and repair rather than the fabrication of more complex ironwork. In total the spheroidal hammerstone recorded (or estimated in t6his case from the samples looked at) did not exceed 6.44g. This was less than 9% of all the finer-fraction hammerscale present within the magnetic residues.

B.2.10 The largest amounts of hammerscale were recorded from the following contexts; 2122 (400g) and 2124 (220g) (2121), 2537 (10.5g), 2066 (7.5g) and 2034 (7.5g) (See table 20)

B.2.11 A breakdown of the various categories iron smithing slag categories from all of the Roman features sampled is shown within Chart 1.

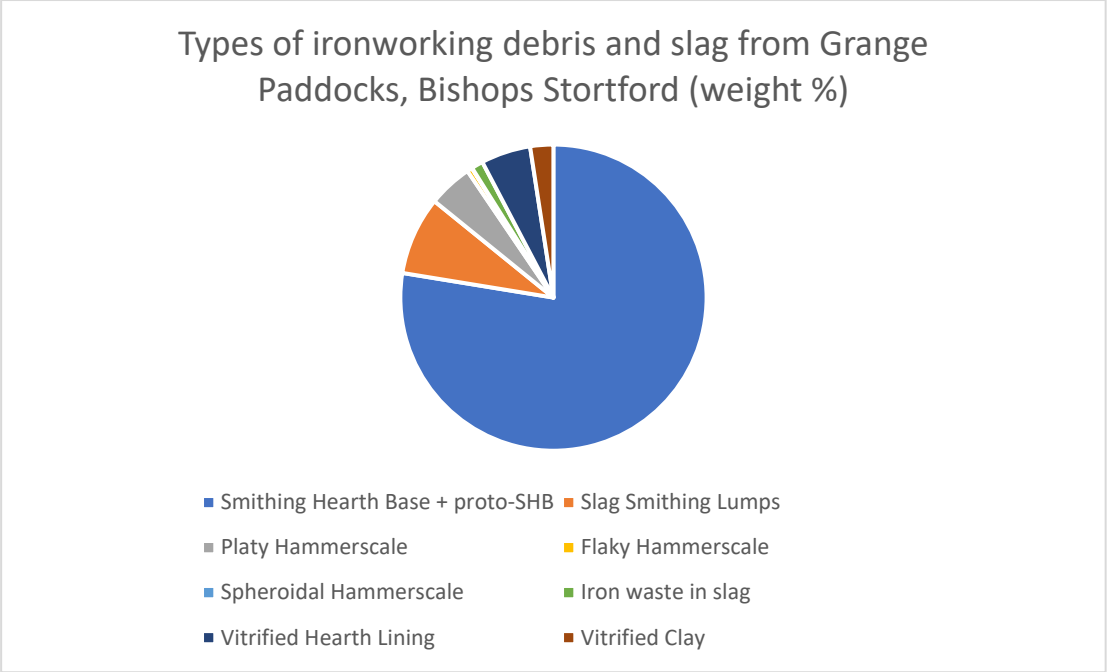

Chart 1: All categories of slag and ironworking debris

Questions to address and further work required

B.2.12 Once a final site distribution plot of all the slag and ironworking debris is available, it will be possible to analyse this large assemblage in more detail and to compare the results of this other data from the excavation and with data from other similar sites.

B.2.13 This is a relatively large ironworking assemblage for a rural Romano-British settlement, yet what this actually means can only be calculated once an assessment of the percentage sampling of each iron slag-bearing context/ feature has been determined and taken into account. It might be possible by this means of examining the waste to estimate the scale of ironworking carried out on site, and whether this was truly industrial rather than simply craft/ repair and maintenance based within one or more dedicated smithy areas.

B.2.14 Comparisons using such calculated figures can then be made with other similar-sized/ dated settlements, some well-recorded examples of which have been studied from rural Cambridgeshire (Evans *et al.* 2008 & 2013).

B.2.15 A much closer examination of the magnetics residues may be worthwhile as a means to assess the type and % composition of hammerscale present more accurately. It was not possible to undertake this fully at the assessment stage, other than providing an approximate indication.

B.2.16 The two examples of copper contamination within the iron smithing debris is perhaps to be expected in such a large assemblage, particularly from a site which has produced evidence of Cu-alloy casting. Confirmation of this 'contamination' element could be verified using pXRF analysis.

Retention, Dispersal and Display

B.2.17 Until analysis is complete, none of the material (listed within the accompanying inventory) should be disposed of.

Catalogue

Context	Group	Phase	No. pieces	Weight (g)	Dimensions (mm)	Identity	Magnetic (0-4)	Type	Period	Notes
1121 (1) <101>	2033	2	1	24	35x30x20	VC + slag	0-1	smithing	Roman?	
1121 (2) <101>	2033	2	2	25	20 + 35	SSL	0+2	smithing	Roman?	small frags of molten slag surface in front of tuyere
2011 <110>	2109	1		3.54		HS	4	smithing	Roman?	<40% flaky HS + <5% spheroidal HS
2066 <105>	2079	1	2	10	20 + 30	SSL	0	smithing	Roman?	
2034 (1)	2033	2	1	20	45x30x25	VC	0-2	smithing?	Roman?	fused clay/ daub lining with both iron + copper contamin
2034 (2)	2033	2	7	114	15-60	VC + SSL	0	smithing	Roman?	conglomeratic vitrified clay mixed with low density iron slag (amorphous)
2034 (3)	2033	2	3	169	70x45x10 +65x45x25 +60x40x20+35	SSL	0 + 2 + 4	smithing	Roman?	irregular dendritic globular melted lumps
2034 (4)	2033	2	4	165	40x35x20 +45x35x25 +40x35x15 + 40x25x25	proto-SHBs?	0	smithing	Roman?	probably minimum 3 small SHBs plano-convex (conical), round and 'folded'. One is broken half
2034 (5)	2033	2	2	138	65x55x30	SHB	0	smithing	Roman?	Two broken bits of small rectangular shaped SHB
2034 (6)	2033	2	4	78	30-45	SHBs	0+2(x1)	smithing	Roman?	various broken pieces of small (minimum x2) SHB
2034 (7)	2033	2	3	180 + 136 +121	85x70x35 + 80x55x20 + 70x55x20	SHBs	0 + 1(x1)	smithing	Roman?	weathered + unweathered SHBs
2034 (8)	2033	2	1	88	55x30x35 (thick)	SHB	0	smithing	Roman	weathered + broken (v dense)
2034 (9)	2033	2	1	60	70x20x15	iron waste	4	smithing?	Roman?	piece of iron tip or else scrap embedded in slag
2034 (10)	2033	2	5	40	20-35	VHL	0	smithing?	Roman?	thin(10-15mm) oxidised lining
2034 (11) <101>	2033	2		7.5		HS	4	smithing	Roman?	>60% flaky HS + <5% spheroidal HS
2035 (1)	2033	2	4	35 + 36 + 323	45x35x20 + 40x30x20+ 85x70x40	proto-SHBs + SHB	4 + 0 + 3	smithing	Roman?	broken frags of small SHBs and large bi-convex irreg shape SHB
2035 (2)	2033	2	1	39	60x40x25	VC	0	smithing	Roman?	frags hearth lining fused
2036	2033	2	1	275	80x70x40	SHB	0-2	smithing	Roman?	ellipsoid irreg bi-convex

Context	Group	Phase	No. pieces	Weight (g)	Dimensions (mm)	Identity	Magnetic (0-4)	Type	Period	Notes
										SHB (part-weathered)
2055 (1) <102>	2188	4	1	50	45x40x25	SHB	0-1	smithing	Roman?	small irreg shaped SHB with blast hollow
2056	2188	4	2	29 + 97	40x30x15 + 60x50x30	proto-SHB + SHB	1 + 3	smithing	Roman?	partial SHB + weathered bi-convex SHB
2061 <103>	2057	2		1.08		HS	4	smithing	Roman?	<20% fine flaky HS
2066 <105>	2079	1		7.52		HS	4	smithing	Roman?	c.70% flaky HS + 5% spheroidal
2076 *	2109	1	1	735	115x130x65	SHB	0-1	smithing	Roman?	v. large complete sub-round bi-convex SHB with conical base + domed top (with ch impressions). Weathered
2084	2014	2	1	98	60x50x32	SHB	1	smithing	Roman?	small bi-convex SHB with charcoal impress + frags of VHL underneath
2082 (1)	2081	2	1	123	65x55x35	SHB	0	smithing	Roman?	small ellipsoid plano-convex SHB w ch impress beneath
2082 (1)	2081	2	1	57	55x40x35	SHB	0-1	smithing	Roman?	small irregular shaped SHB
2082 (2)	2081	2	1	24	40x25x27	proto-SHB	1-2	smithing	Roman?	irregular
2082 (3)	2081	2	1	60	65x60x20	SHB	0-1	smithing	Roman?	irregular shaped plano- discoid type SHB
2082 (4)	2081	2	6	58	45x35x10 +45x25x20 + 25	VHL	0 + 1 + 3(x1)	smithing	Roman?	strongly vitrified top without iron slag +red oxid beneath
2082 (5)	2081	2	1	61	50x35x20	SHB	0	smithing	Roman?	half of a small broken ellipsoid plano-convex SHB.
2082 (6)	2081	2	1	59	70x40x25	SHB	0-1	smithing	Roman?	irreg shape sub-cylindric SHB
2082 (7)	2081	2	3	64	35-45	SSL	1(x1) + 0	smithing	Roman?	various
2082 (8)	2081	2	2	16	35 + 32	VHL	0	smithing	Roman?	
2098	2007	4	1	296	75x85x40	SHB	2	smithing	Roman?	plano-convex SHB with tuyere hinge + minor trace VHL + grit
2105 <109>	2100	2		0.38		HS	4	smithing	Roman?	15-20% fine flaky HS
2122 (1)	2100	2	2	110 + 275	55x60x30 + 105x80x35	SHBs	1 + 0	smithing	Roman?	small plano-convex SHB + larger irreg shape SHB
2122 (2)	2100	2	1	175	85x40x40	SHB	0-1	smithing	Roman?	unusual shaped sub-cylindrical SHB with oxid top
2122 (3)	2100	2	2	17	40x30x6 + 20x20x5	VHL	1 + 0	smithing	Romn?	incl thin slag skin-covered hearth base (VHL) with air blast depress (front of tuyere)

Context	Group	Phase	No. pieces	Weight (g)	Dimensions (mm)	Identity	Magnetic (0-4)	Type	Period	Notes
2122 (4)*	2100	2	3	17	45x256x3-4 + 40x20x3 + 35	slag drip	1+2+3	smithing	Roman?	slag skin formed in (bottom of) tuyere (25mm diam) + below this + stalactitic drip
2122 (5) 1<106>	2100	2	00s	119		HS, slag particle + FC	4 (HS)	smithing	Roman?	70% large platy HS + minor hollow spheroidal
2122 (6) <106>	2100	2	000s	367		FC+sand +HS	4(HS)	smithing	Roman?	75-80% flaky HS
2122 (7) <106>	2100	2	00s	1256	SHB: 100x60x30 + many	SSL + broken-up SHB + VHL	0-3	smithing	Roman?	various mostly broken-up iron-working waste (>2mm MWD)
2124 (1)	2100	2	1	5	35x15x10	VC slag drip	0	smithing	Roman?	
2124 (2)	2100	2	3	51	60x45x15 + 60x30x10 + 30	VHL	0	smithing	Roman?	vitrified surface with red oxid fired clay ext
2124 (3) <107>	2100	2	000s	145		HS,slag particle+ FC	4 (HS)	smithing	Roman?	70-80% large platy HS
2124 (4) <107>	2100	2	000s	170		HS, sand + minor FC	4 (HS)	smithing	Roman?	70% small platy HS
2124 (5) <107>	2100	2	00s	387		iron waste (34g) VHL + SSL	0-1	smithing	Roman?	residue of bulk sample >4mm fraction
2127 (1)	2100	2	2	28	45x40x10	VHL	3	smithing	Roman?	possibly assoc with 2124
2127 (2)	2100	2	1	6	30x8	FC	0	smithing	Roman?	unvitrified edge of same hearth?
2130	2100	2	1	6	20	VHL/slag	3	smithing	Roman?	
2163 (1)	2007	4	1	357	110x80x30 (refit)	SHB	1-3	smithing	Roman	c.70% of a large broken-up plano-disc like SHB with BF attached to base
2163 (2)	2007	4	2	37	30 + 25	SHB	0	smithing	Roman?	broken-up frags of SHB
2163 (3) <111>	2007	4		0.84		HS	4	smithing	Roman?	40% fine flaky HS + <5% spheroidal HS
2164	2007	4	1	46	55x35x25	SHB	1-2	smithing	Roman?	v irreg smlall SHB with charcoal impress beneath
2176 <115>	2176	4		4.28		HS	4	smithing	Roman?	60% fine flaky HS + 5% spheroidal HS
2180 <116>	2176	4		3.27		HS	4	smithing	Roman?	>70% flaky HS + <5% spheroidal HS
2185 <117>	2176	4		1.72		HS	4	smithing	Roman?	60% fine flaky HS + 10% fine spheroidal
2191	2188	4	3	15	30x30x8 (refit) + 25	VHL	0	smithing	Roman?	vitrified lining with red oxid underneath + accret flint gr
2199 <119>	2176	4		3.03		HS	4	smithing	Roman?	50% fine flaky HS
2202 <118>	2007	4		3.1		HS	4	smithing	Roman?	>60% flaky HS + <5% spheroidal HS
2203	2007	4	1	93	60x40x40	SHB	1-4	smithing	Roman	irreg small with conular base
2204 *	2007	4	1	286	85x90x30	SHB	0-2	smithing	Roman?	symmetrical plano-disc like SHB with

Context	Group	Phase	No. pieces	Weight (g)	Dimensions (mm)	Identity	Magnetic (0-4)	Type	Period	Notes
										oxid top + ch + uneven part-vitrif base
2205 (1)	2007	4	1	160	95x75x25	SHB	2-3	smithing	Roman?	irregular shape plano-disc form with uneven top. Weathered
2205 (2)	2007	4	2	35	25 + 30	SHB	1	smithing	Roman?	broken-up SHB fragments
2207 <166>	2208	2		3.98		HS	4	smithing	Roman?	50%+ fine flaky HS (oxidised)
2252	2246	2	1	14	35	VHL	0	smithing	Roman?	
2254	2246	2	2	17	20 + 30	SHB	0	smithing	Roman?	broken-up SHB fragments
2258 <121>	2246	2		1.08		HS	4	smithing	Roman?	>40% fine flaky HS + <10% small spheroidal
2292 (1) <122>	2069	1		2.72		HS	4	smithing	Roman?	60% fine flaky HS + 10% fine spheroid HS
2292 (2) <122>	2069	1		1.14		FC + BF + HS	4	smithing	Roman?	<15% large platy HS
2295 <123>	2071	1		0.98		HS	4	smithing	Roman?	80% fine flaky HS
2505 <164>	2246	2		3.12		HS	4	smithing	Roman?	>50% fine flake HS
2507 <133>	2246	2		1.23		HS	4	smithing	Roman?	>40% flaky HS + <5% spheroidal
2509 <134>	2246	2		1.23		HS	4	smithing	Roman?	70% fine flaky HS + <5% spheroidal
2537 (1) <125>	2196	3		10.62		HS	4	smithing	Roman?	70% flaky HS + 10% spheroidal
2537 (2) <125>	2196	3		11.03		FC+BF+slag+HS	4	smithing	Roman?	<30% platy HS
2537 (3) <125>	2196	3		18.58		VC + SSL	1-4	smithing	Roman?	>4mm fraction
2599	2385	3	1	100	70x50x35	SHB	2-3	smithing	Roman?	irreg plano-convex SHB. Weathered
2665 <127>	2037	2		1.35		HS	4	smithing	Roman?	25% fine flaky HS
2667 <128>	2037	2		1.03		HS	4	smithing	Roman?	25% fine flaky HS
2672 (1)	2562	1	1	244 +324	100x90x35 + 80x70x35	SHB + SHB/VHL	1 + 2	smithing	Roman?	plano-convex SHB + irreg SHB attached horizontal to vitrified/ slag infilled VHL (diameter hearth 200mm)
2672 (2) <160>	2562	1		3.66		HS	4	smithing	Roman?	80%+ fine flaky HS + <5% spheroidal
2673 (1)*	2562	1	1	188	60x70x50	double SHB	1-2	smithing	Roman?	double composite convex-conical SHB with accreted charcoal (impress) and flint grit on base
2673 (2)	2562	1	1	369	100x95x40	SHB	0-4	smithing	Roman?	plano to concave-convex SHB with impress large charcoal

Context	Group	Phase	No. pieces	Weight (g)	Dimensions (mm)	Identity	Magnetic (0-4)	Type	Period	Notes
										on top/base with Fe
2673 (3)	2562	1	2	142 + 50	60x45x40 + 50x40x30	SHBs	1 + 2	smithing	Roman?	small irreg bi-convex SHBs with broken edges
2673 (4)	2562	1	2	28	50x50x15 (refit)	SSL	0	smithing	Roman?	2 pieces of molten slag top from melted SHB close to tuyere point – large cavity
2673 (5) *	2562	1	1	7	35x25x5 (thick)	slag accretion	1	smithing	Roman	cast of slag formed around the nozzle rim of a lipped ceramic or iron tuyere 23mm diameter aperture
2673 (6)	2562	1	1	48	60x50x8	SSL/ iron	4	smithing	Roman?	free smithed iron or iron waste fallen into hearth
2673 (7)	2562	1	3	112 + 49 + 41	40x45x40 (thick) + 50x40x23 + 50x35x22	SHBs	1-2 + 2 + 0	smithing	Roman?	broken frags of: an irregular SHB (attached horiz to VHL on side of hearth) + 2 small irreg plano-convex SHBs
2673 (8)	2562	1	1	382	85x120x40	SHB	0-4	smithing	Roman?	large irreg shape plan-convex SHB with rim edge rich in free iron and minor Cu contam
2673 (9)	2562	1	1	36	40x40x20	SSL/ iron	4	smithing	Roman?	slag-encrust frag iron waste
2675 (1)	2081	2	1	337	100x90x30	SHB	0-2	smithing	Roman?	wide plano-disc like SHB with v uneven base
2675 (2)	2081	2	2	60	35x30x30 + 40x30x25	SHB	2+3	smithing	Roman?	broken fragments
2676	2081	2	2	6	30x20x8 (refit)	VHL	0	smithing	Roman?	
2678 <129>	2057	2		2.32		HS	4	smithing	Roman?	75% fine flaky HS + 5-10% spheroidal
2679 <130>	2057	2		2.51		HS	4	smithing	Roman?	c.60% fine flaky HS + <10% fine spheroidal
2682 <131>	2057	2		1.99		HS	4	smithing	Roman?	75%+ fine flaky HS
2684 <132>	2686	2		1.52		HS	4	smithing	Roman?	<50% fine flaky HS
2687 (1)	2686	2	1	189	75x55x30	SHB	3-4	smithing	Roman?	c.60% (broken-up SHB)
2687 (2) <135>	2687	2		3.19		HS	4	smithing	Roman?	>60% flaky HS
2679*	2057	2	1	417	110x100x35	SHB	2-3	smithing	Roman?	large irreg shape concavo-convex SHB with Fe-impreg charcoal on top and

Context	Group	Phase	No. pieces	Weight (g)	Dimensions (mm)	Identity	Magnetic (0-4)	Type	Period	Notes
										accreted chalk beneath
2702 <137>	2057	2		7.79		HS	4	smithing	Roman?	80% flaky HS + 5% spheroidal
2716 <139>	2057	2		2.67		HS	4	smithing	Roman?	60%+ flaky HS (fine/course) + <5% spheroidal
2740 <143>	2739	2		0.57		HS	4	smithing	Roman?	<50% fine flaky HS
2747 (1) <140>	2057	2		3.78		HS	4	smithing	Roman?	70%+ fine flaky HS + <5% spheroidal
2747 (2) <140>	2057	2		82.31	65x50x25	SHB	1	smithing	Roman?	irregular-shaped sub plano-convex
2843 <141>	2686	2		3.32		slag particle + FC +HS	4	smithing	Roman?	<10% HS mostly magnetic slag >2mm
2844	2686	2	1	152	70x60x35	SHB	1-4	smithing	Roman?	broken-up SHB (70%) concav-convex with molten tp
2867 <142>	2739	2		0.11		HS	4	smithing	Roman?	<20% fine flaky HS
2972 SF [545]	2168	1	1	67	60x55x20	SHB	0	smithing	Roman?	small v irreg shape plano-discoid SHB
2973 <148>	2168	1		8.22		HS	4	smithing	Roman?	50%+ flaky HS + 5% spheroidal
3059 <147>	2168	1		1.7		HS	4	smithing	Roman?	<25% flaky HS + <5% spheroidal
3075	2165	2	4	87	45x35x30 + 15+25	broken-up SHB	1	smithing	Roman?	fragments of small (incomplete) irreg shape SHB
3087 (1)	3093	3	1	446	105x85x45	double SHB	1-4	smithng	Roman?	large irreg plano-convex SHB which is composite (2nd fused underneath) with molten top surface + tuyere blast depression
3087 (2)	3093	3	1	31	40x25x20	SHB	0	smithing	Roman?	fragment broken-up SHB
3123 (1)	2825	3	5	9	5-10	SSL?	0	smithing	Roman?	small crushed frags
3123 (2)	2825	3	1	2	10	SSL?	0	smithing	Roman?	ditto
3144 <161>	2069	1		2.88		HS	4	smithing	Roman?	c.30% fine flaky HS + 10% spheroidal
3150 SF 548	2686	2	1	114	65x50x35	SHB	0	smithing	Roman?	irregular shaped plano-convex SHB
3171 (1) <156>	2168	1		2.07		HS	4	smithing	Roman?	25% fine/course flaky HS
3171 (2) <156>	2168	1		0.6		FC + HS	4	smithing	Roman?	<20% platy HS
3207 (1) <150>	2350	2		1.8		HS	4	smithing	Roman?	80%+ flaky HS + 5-10% spheroidal

Context	Group	Phase	No. pieces	Weight (g)	Dimensions (mm)	Identity	Magnetic (0-4)	Type	Period	Notes
3207 (2) <150>	2350	2		6.08		FC+BF+slag+ HS	4	smithing	Roman?	<20% large platy HS
3207 <150>	2350	2		80.42		VHL (39g) + proto-SHB (37g)	0	smithing	Roman?	
3208	2350	2	2	34	40x25x30	SSL	2	smithing	Roman?	parts of one
3210 <157>	2138	1		1.8		HS	4	smithing	Roman?	<30% fine flake HS (oxidised)
3252 (1) <159>	3093	3		1		HS	4	smithing	Roman?	c.30% fine flaky HS + 20% spheroidal
3254 <158>	3093	3		2.12		HS	4	smithing	Roman?	25-30% fine flaky HS
3257 <162>	3093	3		37.93		slag particle + VC+ VHL	1-2	smithing	Roman?	
3263	3093	3	1	6	30	VC	0	smithing	Roman?	vitrified clay lump in fuel

Table 20: Ironworking debris catalogue

B.3 Cu-alloy metalworking debris by Simon Timberlake

Introduction

B.3.1 A total of 117g (15 pieces) of Cu-alloy metalworking debris was recovered and examined from this site. Most of this came from the fill(s) of one feature, a Roman SFB (**2246**) dating to the 2nd century AD (Phase 2).

Methodology

B.3.2 The debris was identified visually using an illuminated x10 magnifying lens. A dropper bottle containing dilute hydrochloric acid was used to confirm the presence or absence of carbonate.

Description of the Cu-alloy metalworking debris

B.3.3 The 116.84g of Cu-alloy metalworking debris consisted of 22g of vitrified-coated crucible (1 sherd), 35g of Cu-alloy metal casting spill, 46g of un-melted or solidified Cu-alloy residue from the base of a crucible, 10.51g of broken-up Cu-alloy scrap and off-cuts for re-melting and 3.33g of casting sprue.

B.3.4 For the purposes of this assessment, it could be determined that this material debris was recorded from three different contexts, 2251 (81.33g), 2252 (25g) and 2505 (10.51g).

B.3.5 A breakdown of the various categories of Cu-alloy metalworking is shown within Chart 2, and the catalogue description in Table 21.

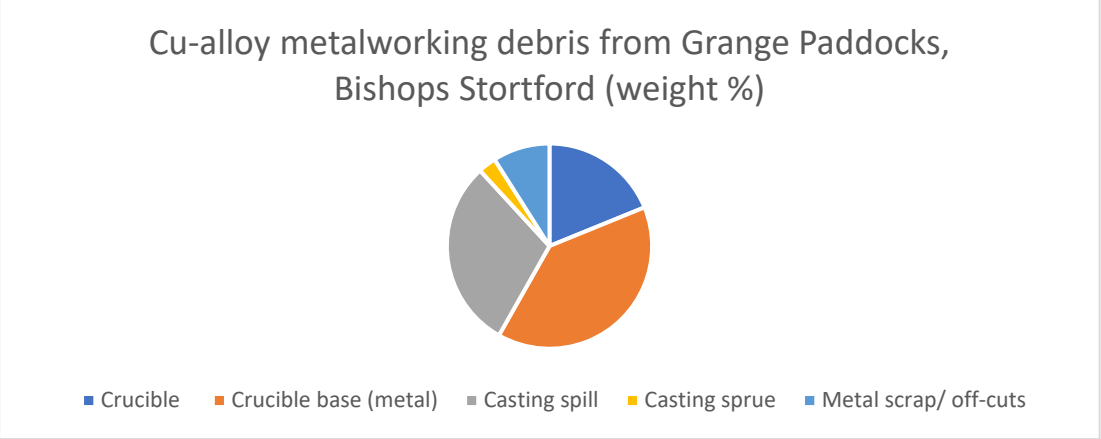

Chart 2: All categories of Cu-alloy metalworking debris

Catalogue

Context	SF no.	Group	Phase	Nos.	Weight (g)	Dimensions (mm)	Identity	Ceramic fabric	Type/ function	Period	Notes
2251	392	2246	2	1	22	60x30x13 (thick)	crucible	refractory clay	casting	Roman (2nd C AD)	sherd from smashed-open crucible with 5mm thick layer of vitrified

Context	SF no.	Group	Phase	Nos.	Weight (g)	Dimensions (mm)	Identity	Ceramic fabric	Type/ function	Period	Notes
											clay coating exterior (perhaps as a repair. Reduced + minor Cu stain
2251	394	2246	2	8	10	30x20x7mm (diameter) +	metal spill		casting spill	Roman (2nd C AD)	small piece of v oxidised casting spill from crucible + droplets of metal (bronze?). From Roman SFB
2251	395	2246	2	1	46	52x35x4-15mm (deep)	metal residue		remaining metal within crucible base	Roman (2nd C AD)	copper or bronze left un-melted or else re-solidified within crucible base. This may have a spill of tin on top. Suggests diameter of base = 53mm
2251	397	2246	2	1	3.33	25x8x3	sprue?		casting sprue cut as scrap	Roman (2nd C AD)	cut at one end – a small 'prong' for re-melting
2252	403	2246	2	1	25	55x17x7 (thick)	metal spill?		casting spill – broken for re-melting?	Roman (2nd C AD)	This may or may not reflect the dimensions of a larger crucible of circa 100mm diam. Metal is almost certainly tin bronze
2505 (1) <164>	712	2246	2	2	10.29	25x15x6 + 12x6x1	metal scrap		copper or bronze scrap for re-melting?	Roman (2nd C AD)	probably a hammered fragment of melted bronze scrap broken-up for re-melting
2505 (2) <164>	712	2246	2	1	0.22	40x2x0.5	metal scrap		cut edge of thin bronze sheet retained for re-melting?	Roman (2nd C AD)	part of the off-cuts retained for the purposes of re-melting. Possibly lost

Table 21: Cu-alloy metalworking debris inventory

Questions to address and further work required

B.3.6 This is a small assemblage which requires only a small amount of additional work, the priority perhaps being semi-quantitative chemical analysis by pXRF to confirm that this is metalworking linked to tin or tin-leaded bronze rather than copper. Full interpretation of the significance of this small assemblage will be addressed during the final report/ publication stage.

B.3.7 Comparisons can then be made with other similar-sized/ dated settlements, some well-recorded examples of which have been studied from rural Cambridgeshire (Evans *et al.* 2013).

Retention, Dispersal and Display

B.3.8 None of the above material should be disposed of.

B.4 Flint by Lawrence Billington

Introduction

B.4.1 The excavations produced a total of 153 worked flints and 10 fragments (217g) of unworked burnt flint. The vast majority of the worked flint was recovered as a residual element from later cut features and includes a high proportion of Mesolithic and earlier Neolithic material.

B.4.2 The assemblage was catalogued directly onto an Excel spreadsheet and the artefacts were classified according to a system of broad artefact/debitage types based on standard definitions for post-glacial lithic assemblages from Southern Britain (*e.g.* Bamford 1985, 72-77; Healy 1988, 48-9; Butler 2005). A summary quantification of the assemblage is presented in Table 22 and a full catalogue of the flintwork by context is provided in Table 23.

Type	Count
Chip	18
Irregular waste	7
Primary flake	5
Secondary flake	41
Tertiary flake	23
Secondary blade-like flake	12
Tertiary blade-like flake	9
Secondary blade/let	10
Tertiary blade/let	17
Microlith	1
Leaf-shaped arrowhead	1
Oblique arrowhead	1
End scraper	3
Truncated blade	1
Flake knife	2
Blade core	1
Flake core	1
Total worked	**153**
Unworked burnt count	10
Unworked burnt weight	217.4g

Table 22: Basic quantification of the flint assemblage by type

Assemblage characterisation

Quantification

B.4.3 Both the worked flint (153 pieces) and the small quantity of unworked burnt flint (10 fragments were thinly distributed across the site – deriving from over 70 individual contexts, almost exclusively from the fills of cut features and other deposits associated with the Romano-British occupation of the site and with no clear evidence that any material was recovered from contemporary (prehistoric) contexts. In most cases the number of flints from individual contexts was low (typically between one and four

pieces); with the sole major exception of the 34 worked flints recovered from bulk sampling (sample 126) of fill 2580 of Phase 2 pit 2579 – although this material was overwhelmingly dominated by chips and very small flake fragments of the kind likely to be significantly underrepresented in hand excavated samples.

Raw materials and condition

B.4.4 The assemblage is made up entirely of flint, generally fine grained and of good quality but very varied in terms of colour, texture and the character of surviving cortical surfaces. Much of the material bears the thin hard abraded cortex typical of gravel cobbles, and may have been sourced from the terrace gravels at or very close to the site. There are, however, a significant number of pieces with thicker, fresher cortex and these seem likely to derive from deposits more closely associated with the parent chalk. Along this stretch of the Stort Valley, the river has cut through the Tertiary deposits of the Lambeth group and into the underlying chalk, and nodules eroded from the chalk could probably have been collected locally from head/mass wastage deposits on the valley sides/floor.

B.4.5 The condition of the worked flint varies, but minor edge damage/rounding is virtually ubiquitous and some pieces display more severe edge damage. This is consistent with most of the worked flint having a complex post-depositional history, probably largely deriving from surface scatters subsequently incorporated into the fills of later features. Approximately 20% of the assemblage displays some recortication ('patination'), varying from a blue sheen to heavy off white/cream. This appears to have at least some chronological significance, with most suspected Mesolithic pieces being recorticated.

Composition and technological/typological characterisation

B.4.6 The composition of the assemblage is fairly typical and 'balanced': unretouched removals (flakes, blades, *etc*.) make up just over three quarters of the assemblage, with the retouched component accounting for 6% of the total assemblage (nine pieces). The number of cores is quite low (two pieces), but this may simply be an artefact of relatively small sample size.

B.4.7 The assemblage includes a very high proportion of blade-based material of the kind associated with Mesolithic and earlier Neolithic technologies. True blades and bladelets make up almost a quarter of unretouched removals (27/117; 23%), whilst blade-like flakes are also well represented (21/117; 18%). This proportion is sufficiently high to suggest that a very significant proportion of the entire worked flint assemblage – perhaps up to three quarters – is of Mesolithic or earlier Neolithic date. There is significant variation in the morphology and technological traits of these blade based removals and, whilst it is difficult to date individual pieces, the presence of both very regular, prismatic (and invariably recorticated) blades/bladelets and somewhat more irregular blades and blade like flakes suggests that both Mesolithic and earlier Neolithic material is well-represented. Alongside these removals, a relatively large, heavily recorticated single platform blade core was recovered from ditch 2562.

B.4.8 The presence of both Mesolithic and earlier Neolithic material is also demonstrated by the presence of several diagnostic retouched tools. The flintwork recovered through bulk sampling of fill 2580 of Phase 2 pit 2579 produced the medial segment of a very narrow (3mm wide) unilaterally backed rod microlith. This kind of diminutive microlith form is characteristic of the later part of the Mesolithic (*c.* 6500-4000 BC) and comparable narrow rods are associated with some of the latest radiocarbon dates for Mesolithic activity in Southern Britain, in the late 5th/early 4th millennium BC (Giffiths 2014). Also very likely to be of Mesolithic date is large prismatic blade with a distal truncation from the fill of ditch 2291 (intervention 3152). Earlier Neolithic activity (*c*. 4000-3400 BC) is represented by a compete leaf-shaped arrowhead from the fill of ditch 2014 (SF 282). Some of the other, less diagnostic, retouched tool forms may also be of earlier Neolithic date, including the three end scrapers in the assemblage (all relatively fine pieces made on large regular flake blanks).

B.4.9 Notwithstanding the high proportion of Mesolithic/earlier Neolithic material in the assemblage, a substantial number of the flake-based removals are likely to be of somewhat later date and relate to activity during the later Neolithic and Early Bronze Age and, although there is no clear evidence for later Bronze Age/Iron Age flintworking, some of this material may relate to even later flintworking. Certainly of Late Neolithic date is a fine, complete oblique arrowhead (SF 286; Clark's (1934) type G), from ditch 2030, which can be dated to between *c*. 2900-2400 BC. The end scrapers noted above could as equally date to the later Neolithic/Early bronze Age as to the earlier Neolithic, whilst two invasively retouched flake knives are perhaps most likely to be of Early Bronze Age date.

Assessment/Statement of potential

B.4.10 This relatively small assemblage has very limited potential to contribute to the research aims of the project. Nonetheless, it does provide evidence for earlier prehistoric activity on the site and includes some relatively closely dated and distinctive pieces (notably a microlith and two arrowheads) and is of some interest in terms of documenting long-term prehistoric activity on the gravel terraces of the River Stort.

Recommendations

B.4.11 The assemblage has been fully catalogued, this provides a suitable record of the assemblage and no further technological/attribute analyses are recommended.

B.4.12 It is recommended that any remaining flint derived from the residues of bulk samples should be recorded.

B.4.13 This report should be updated and slightly expanded to produce a full archive report on the assemblage suitable for inclusion in any full excavation report.

Context	Cut	sample	small find no.	group	Phase	Context type	Chip	Irregular waste	Primary flake	Secondary flake	Tertiary flake	Secondary blade-like flake	Tertiary blade-like flake	Secondary blade/let	Tertiary blade/let	Microlith	Leaf-shaped arrowhead	Oblique arrowhead	End scraper	Truncated blade	Flake knife	Blade core	Flake core	Total worked	Unworked burnt count	Unworked burnt weight (g)
2001	0			2001	9	Subsoil							1		1									2		
2010	2109			2109	1	pit				1														1		
2011	2109			2109	1	pit					1													1		
2013	2012			2012	2	ditch		1		2				1										4		
2015	2014		282	2014	2	ditch											1							1		
2015	2014			2014	2	ditch									1									1		
2031	2030		286	2014	2	ditch												1						1		
2034	2033			2033	2	pit									1									1		
2070	2069			2069	1	ditch							1											1		
2076	2109			2109	1	pit							1											1		
2076	2109		324	2109	1	pit															1			1		
2078	2109			2109	1	pit								1										1		
2088	2087			2260	1	pit					1			2										3		
2136	2135		303	2135	1	ditch													1					1		
2188	0			2188	4	layer							1	1										2		
2202	0			2007	4	layer					1													1		
2237	2236			2002	1	ditch																			1	58
2277	2246	120		2246	2	skeleton				1	1													2		
2292	2291			2069	1	ditch		1							1									2		
2295	2293			2071	2	ditch						1												1		
2325	2324			2322	3	post hole					1													1		
2363	2362			2071	2	ditch				1														1		
2398	2397			2350	2	pit				1														1		
2399	2397			2350	2	pit		1																1		
2404	0			2007	4	layer			1	1														2		
2408	0			2007	4	layer				1														1		
2409	0			2007	4	layer		1							1									2		
2411	0			2007	4	layer				1														1		
2419	0			2007	4	layer				1														1		

Context	Cut	sample	small find no.	group	Phase	Context type	Chip	Irregular waste	Primary flake	Secondary flake	Tertiary flake	Secondary blade-like flake	Tertiary blade-like flake	Secondary blade/let	Tertiary blade/let	Microlith	Leaf-shaped arrowhead	Oblique arrowhead	End scraper	Truncated blade	Flake knife	Blade core	Flake core	Total worked	Unworked burnt count	Unworked burnt weight (g)
2444	0			2176	4	layer						1			1									2		
2459	0			2176	4	layer						1	1											2		
2469	0			2188	4	layer		1																1		
2563	2562			2562	3	ditch																1		1		
2580	2579		126	2538	2	pit	17			10	4				2	1								34	4	22
2662	2579			2538	2	pit				1														1		
2663	2579			2538	2	pit							1											1		
2665	2579			2538	2	pit					1													1		
2669	2668			2538	2	pit				1														1		
2672	2726			2562	3	ditch			1					1										2		
2673	2726			2562	3	ditch							2											2		
2675	2671			2081	2	ditch			1															1		
2684	2683	132		2686	2	grave	1			1														2		
2687	2686			2686	2	SFB					3													3		
2688	2686			2686	2	SFB		1		3	1													5	1	4.5
2688	2686			2686	2	SFB				2	1	1		1										5		
2714	2712		138	2686	2	Grave						1												1		
2740	2739			2739	2	pit						1												1		
2779	2778			2774	3	post hole			2	1														3		
2816	2813			2196	3	pit					1	1											1	3		
2818	2817			2344	1	pit				1	3													4		
2824	2823			2193	2	pit					1													1		
2830	2686			2686	2	SFB				1	1				1									3		
2857	2856			2560	5	pit															1			1		
2900	2899			2899	1	pit				1														1		
2968	0			0	9	void									1									1		
2972	3247			2168	1	pit								1					1					2		
2975	3247			2168	1	pit						1			1									2		
2976	3247			2168	1	pit						1												1		
3017	3167			2168	1	structure													1					1		

Context	Cut	sample	small find no.	group	Phase	Context type	Chip	Irregular waste	Primary flake	Secondary flake	Tertiary flake	Secondary blade-like flake	Tertiary blade-like flake	Secondary blade/let	Tertiary blade/let	Microlith	Leaf-shaped arrowhead	Oblique arrowhead	End scraper	Truncated blade	Flake knife	Blade core	Flake core	Total worked	Unworked burnt count	Unworked burnt weight (g)
3053	3052			2395	5	ditch				1		1			1									3		
3054	3274			3093	3	pit									1									1		
3056	3247			2168	1	pit							1											1	1	6.3
3075	3071			2165	2	ditch					1													1		
3085	3258			3093	3	midden				1														1		
3086	3258			3093	3	midden				2														2		
3090	3258			3093	3	in situ burning		1		1														2		
3096	3093			3093	3	SFB									1									1		
3098	3166			3093	3	SFB									1									1		
3102	3101			2825	3	pit									1									1		
3104	3101			2825	3	pit				1		1			1									3		
3138	3247			2168	1	pit				2														2		
3155	3152			2291	3	ditch														1				1		
3164	3166			3093	3	fill of SFB								1										1	3	127
3168	3167			2168	1	fill of SFB					1													1		
3204	3202			2196	3	pit				1														1		
3259	3258			3093	3	SFB						1												1		
3263	3258			3093	3	SFB								1										1		

Table 23. Catalogue of the flint assemblage

B.5 Burnt Stone by Simon Timberlake

Introduction

B.5.1 A total of 416g (x6 pieces) of unworked and unused burnt cobble stone was identified from amongst the stone assemblage recovered from this site. There were no identifiable pieces amongst this used as building stone. Most of the stone had the characteristics of prehistoric burnt stone, either as hearth stone or as 'potboiler'.

Methodology

B.5.2 The stone was identified visually using an illuminated x10 magnifying lens. A dropper bottle containing dilute hydrochloric acid was used to confirm the presence or absence of calcite in the rock.

Catalogue and description of burnt stone

B.5.3 For the most part, the burnt stone from this site consisted of sub-rounded to sub-angular glacial erratic cobbles and small weathered slabs measuring between *c*. 20-90 mm in diameter; the heat-broken fragments averaging around 50-60mm in size. In most cases there was no particular evidence for immersion of the hot stone in water, although this could be seen in some examples. Typically, this stone was dominated by sandstone and quartzitic sandstone, although it included a minor amount of oolitic limestone, the latter perhaps Roman in origin rather than prehistoric (Bronze Age – Iron Age). Most likely this stone was re-deposited within the features in which it was found. Its original use may have been for cooking in pits, with most of it probably being Iron Age in date.

Statement of potential

B.5.4 There is no potential for further analysis or research owing to the small size of the assemblage and lack of contemporaneity with features.

Retention, Dispersal and Display

B.5.5 All of the burnt stone recorded can be disposed of forthwith.

Context	Nos. pieces	Weight (g)	Dimensions (mm)	Geology	Comments	Period
2082	1	59	75x50x20	quartz sandstone	heat-fractured flake	prehistoric?
2207	1	76	80x15x45 (thick)	bioclastic oolite (Lincolnshire Lmstn)	moderately burnt	
2408	1	85	55x55x15	fine quartzitic sandstone	lightly burnt only	prehistoric?
2429	1	94	90x35x35	sandstone	strongly burnt	prehistoric?
2509	1	53	65x60x7	micaceous fiussile sstn (slate)	lightly burnt?	NOT building stone
3086	1	49	50x35x15	fine quartzitic sandstone	lightly burnt only	prehistoric?

Table 24: Catalogue of burnt stone

B.6 Worked Stone by Simon Timberlake

Introduction

B.6.1 Some 11009g of worked stone (69 pieces), consisting mostly of rotary quern stone (9742g (x56 pieces)) and whetstone (1267g (x7 pieces)) was identified, with all of it probably being Roman in date. The largest amounts (by weight) of quern and whetstone came from contexts 3090 (1911g, SFB **3093**, Phase 3), 2816 (1427g, Pit Group **2196**, Phase 3), 2690 (1091g, Pit Group **2057**, Phase 2), 2016 (909g, Ditch **2014**, Phase 2) and 2506 (823g, SFB **2246**, Phase 2).

Methodology

B.6.2 The stone was identified visually using an illuminated x10 magnifying lens, and compared where necessary with an archaeological worked stone reference collection. A dropper bottle containing dilute hydrochloric acid was used to confirm the presence or absence of calcite in the rock.

Description and discussion of the worked stone

B.6.3 A full catalogue of the worked stone from this site which includes rotary quern, whetstone and anvil (both as primary but also as secondary re-used material) is provided in Table 25.

Rotary quern

B.6.4 Most of this material consisted of imported lava quernstone (7149g (56 pieces) from the Mayen quarries on the River Rhine (Germany). Much of this lava quern was extremely worn, fragmentary, burnt and weathered from the contexts in which it was found, although enough diagnostic pieces have survived to be able to confirm that these came originally from Roman-type hand mills of between 310-460 mm diameter, with most of the recognisable fragments derived from upper stones. Most typically such querns date from the second half of the 1st to the end of the 2nd century AD. The lava quern came from 20 different contexts, with most of it (by weight) coming from contexts 3090 and 2690.

B.6.5 In much smaller amounts were the pieces of Romano-British Millstone Grit quern (1392g (4 pieces)) which had been imported into this area from the Southern Pennines (Melbourn/Duffield or Wharnecliffe Crag in the Southern Pennines (see Hayward in Evans *et al.* 2013 & Pearson 2000)). Most of these querns which had survived here just as fragments seemed to be of the standard 'disc' or 'cake' types (Shaffrey 2006). These querns were slightly smaller in diameter (250-310mm) and marginally later in date (typically 2nd-3rd century AD) than the lava ones.

B.6.6 Yet another example of a Romano-British quern was that manufactured from Old Red Sandstone (ORS) (909g) identified within context 2016. This piece was probably from an originally much larger upper stone (up to 430mm diameter) which was likewise early (1st-2nd century AD) in date. A single Late Iron Age-early Romano-British type quernstone fragment made from the Lodsworth Greensand (origins near Midhurst,

West Sussex (Green 2017)) was also identified from context 2439. This may have been residual.

Whetstone

B.6.7 A total of 1267g of primary whetstone was recovered from seven different contexts, with most of this (by weight) coming from context 2816 (725g, Pit Group **2196**, Phase 3). This primary whetstone consisted of 959g (4 pieces) opportunistically made from suitably sized/shaped local sandstone/gritstone pebbles, all of which were probably found as small glacial erratics within the local boulder clay or gravels. However, another 30g (3 pieces) were of more carefully fashioned types manufactured from recognisable Romano-British whetstone extraction sources across Southern Britain – this included various lithologies noted as having been used for making whetstones, *e.g.* the Pennant sandstone from South Wales 3090 (SFB **3093**, Phase 3), the ORS brownstone sandstone from the area of the Severn Estuary (2421) and the Wealden Clay Sandstone from the Surrey/Sussex border 2465 (Layer 2188, Phase 4). The latter had been fashioned in the typical bar rectangular pocket-size form typical of so many of these late 1st/2nd to early 4th century AD products, although the others took the form of tabular shaped stones (Allen 2014).

B.6.8 In addition to the primary whetstone, several fragments of discarded quern had been picked up and then used (or re-used) as secondary whetstone (in this case 1144g (2 pieces)). This included fragments of Old Red Sandstone and Millstone Grit, both of which as quartz-rich gritstones were eminently suitable as honestones for the sharpening of knives. The incidence of knife-cut grooves on these for the removal of metal burr after sharpening would seem to confirm this suggestion.

Anvil

B.6.9 A single small fragment of Millstone Grit quern from context 3098 (SFB **3093**, Phase 3) appears likewise to have been re-used as a small anvil (123g).

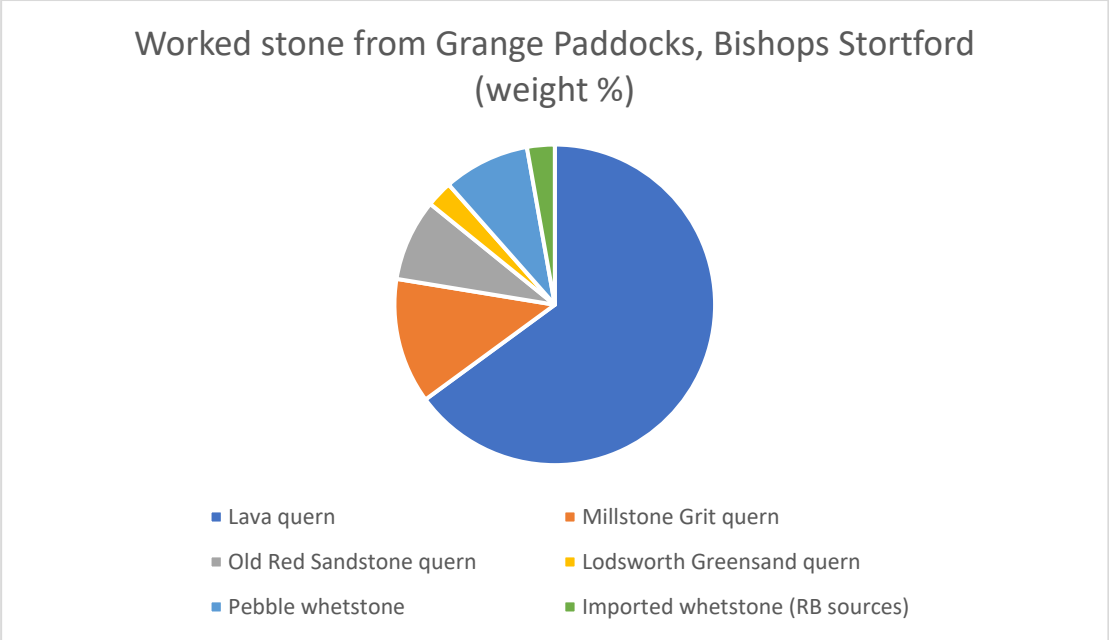

Chart 3: Primary-use Roman worked stone (proportions by weight%)

Conclusions

B.6.10 The presence here of a small amount of 'prehistoric-type' burnt stone suggests an earlier, although minor, archaeological background to this site although no archaeological features dated to the prehistoric periods have been identified.

B.6.11 The relatively high incidence of lava quern might support evidence for a late 1st century origin, and also a predominance of settlement activity across the 1-2nd centuries AD. Equally its abundance compared to other quern may reflect upon its closer proximity to Roman London and to road access.

B.6.12 Also of significance is the un-expected absence of Hertfordshire Puddingstone, since some of the known extraction sources lie local to this site. This may indicate a relative absence of Late Iron Age/Conquest period occupation. Indeed, by the late 1st century AD this local quern manufacturing industry had all but ceased to function.

B.6.13 The small to moderate abundance of Millstone Grit and Old Red Sandstone quern is to be expected at any East of England Romano-British settlement of the late 1st to 3rd century AD. More unusual is the residual presence of Lodsworth quern, typically a Late Iron Age industry and distribution, although examples of these are found scattered across Eastern England, particularly at those sites without much access to Puddingstone or to Folkestone Greensand quern.

B.6.14 The moderately frequent incidence of whetstone is to be expected at such a large Romano-British settlement. Imported whetstone hints at the presence of moderately high status buildings, dwellings and workshops, whilst the opportunistic use of pebbles as whetstones, and also the re-use of discarded quern, hints at the loss of trade or access to preferred materials. This is not, however, uncommon; one prime

example of a large rural RB settlement where such 're-cycling' of stone was undertaken being Roman Northstowe near Bar Hill, Cambridge.

Further work required

B.6.15 Following a full phasing of the site and the more accurate dating of the contexts/ features it will be possible to assess the chronological significance of the worked stone assemblage more accurately. At this point, a much more comprehensive interpretation of the existing catalogue inventory of worked stone will become possible. At the same time the worked stone objects indicated should be drawn/ illustrated, and distribution plots prepared for the various types of quern and whetstone. A further 2-3 days of work may be needed prior to final report/ publication.

Retention, Dispersal and Display

B.6.16 There is no need to consider this at the present stage for the worked stone.

Catalogue

Context	SF no	Group	Phase	No. pcs	Wt (g)	Dimension (mm)	Identity	Wear (0-4)	Geology	Origin	Period	Notes + re-use
2008		2188	4	1	77	65x55x12	whetstone	3	micaceous sstn	glacial erratic	Rom?	pebble whetstone type (broken – poss assoc 2174)
2016*		2014	2	1	909	190x95x25-45 (centre)	L/S of a ORS Type 2b (Shaffrey 2006)	3	brownstone qtz sstn Lower ORS	Severn Estuary area	1st-2nd?	very worn with raised central spindle (40mm). Estim orig diam 430mm. Re-used as **whetstone**
2017		2014	2	3	82	50x25x25 (thick) + 35	lava quern	4	basalt lava	Mayen, Germany	1st-2nd	undiagnostic heavily burnt
2023		2026	2	1	114	50x45x40	U/S raised kerb style lava quern	4	basalt lava	Mayen, Germany	1st-2nd	small frag of 45mm wide kerb rim (35mm thick) with diagonal chisel marks pres
2024		2026	2	1	134	60x50x37-30	U/S raised kerb style lava quern	4	basalt lava	Mayen, Germany	1st-2nd	small frag of 45mm wide kerb rim (35mm thick) : part of 2023? burnt
2127		2100	2	4	301	50x40x30 (thick) +50x30x35 + 40	lava quern	4	basalt lava	Mayen, Germany	1st-2nd	non-refit frags (undiagnos) part of 30mm thick
2174		2188	4	1	46	45x37x13	whetstone?	2	micaceous sstn/ gritstn	glacial erratic?	Roman	broken square – possible use on top face only
2247*		2246	2	1	111	85x55x10-15	whetstone	3	micaceous sstn/ gritstn	glacial erratic?	Roman	broken piece (burnt) pebble whetstone

Context	SF no	Group	Phase	No. pcs	Wt (g)	Dimension (mm)	Identity	Wear (0-4)	Geology	Origin	Period	Notes + re-use
												well used on top (high polish)
2251		2246	2	2	442	110x85x45-15 (refit pieces)	U/S raised kerb style lava quern	4	basalt lava	Mayen, Germany	1st-2nd	well faced kerb (40mm wide) +vert chisel rim (50mm)
2421*		2007	4	1	100	90x55x12-5 (worn)	tabular whetstone	3-4	micac sstn (Brownstone LORS)	Avon – Severn Estuary (import)	2nd – 4th	very well worn dish shape both faces and edge bevelled with knife groove
2434		2007	4	1	332	80x75x40-30 (thick)	U/S Type 1b (Shaffrey 2006)	3	Millstone Grit	S.Pennines	Roman	vertical striated rim edge, grind surface rotation scored. Estim diam 320mm
2439		2176	4	1	292	75x45x50	L/S fragment of rotary quern (Green 2017)	2	Lodsworth Greensand	LGS, Lodsworth, Midhurst W.Sussex	Late IA/ Early RB	slightly concave grind surface – not that worn. Burnt frag
2451		2176	4	1	235	60x70x27-32	U/S Type 1b (Shaffey 2006) quern+whetston	2+ 3	Millstone Grit	S.Pennines	2nd -3rd	rim edge of small quern est diam 310mm re-used as **whetstone** on top
2465*		2188	4	1	44	55x22x27(x-sec)	bar-shaped whetstone	3	Weald Clay Sandstone	Surrey/ Sussex	late 1st – 4th C	broken-off frag of imported bar pocket whetstone with rectangul x-s
2505		2246	2	2	28	25 + 30	lava quern	4	basalt lava	Mayen, Germany	1st-2nd	undiagnostic heavily burnt
2563		2562	1	3	163	60x44x40 (thick) re-fit piece + 25	lava quern	4	basalt lava	Mayen, Germany	1st-2nd	undiagnostic heavily burnt
2578		2069	1	2	161	65x95x30-55 +40	U/S raised kerb style lava quern	4	basalt lava	Mayen, Germany	1st-2nd	estimate diam 420mm burnt
2596 (1)	641	2385	3	1	538	200x105x20	L/S lava quern?	4	basalt lava	Mayen, Germany	1st-2nd	estimate diam 390mm. Heavily burnt
2596 (2)		2385	3	5	208	40x35x25 (thick +	lava quern	4	basalt lava	Mayen, Germany	1st-2nd	undiagnostic. Heavily burnt
2679		2057	2	2	129	75x20x30 (thick) +45x35x25	possibly L/S?	4	basalt lava	Mayen, Germany	1st-2nd	more or less undiagnost - burnt
2690*		2057	2	1	1091	270x90x10-45	U/S raised kerb style lava quern	4?	basalt lava	Mayen, Germany	1st-2nd	with well faced kerb (40mm wide) +vertical chiselled rim + trace of harp design on top
2764 (1)		2071	2	1	28	40x30x25	lava quern	4	basalt lava	Mayen, Germany	1st-2nd	undiagnostic. Heavily burnt
2764 (2)		2071	2	2	99	55x30x30 + 23	lava quern	4	basalt lava	Mayen, Germany	1st-2nd	undiagnostic. Heavily burnt

Context	SF no	Group	Phase	No. pcs	Wt (g)	Dimension (mm)	Identity	Wear (0-4)	Geology	Origin	Period	Notes + re-use
2769		2761	2	2	37	35x30x30 (thick)	lava quern	4	basalt lava	Mayen, Germany	1st-2nd	undiagnostic. Heavily burnt
2816 (1)		2196	3	1	702	110x80x50-60	U/S or L/S cake style	2-3	Millstone Grit	S. Pennines	Roman (2nd-3rd	peck-pattern top/ bottom + burnt
2816 (2)		2196	3	1	725	120x135x20-30	whetstone	3	micaceous sandstone	glacial erratic	Roman	part of a chipped disc (not quern) re-used as whetstone on upper face. BS
2822		2615	3	1	23	35x30x20	lava quern	4	basalt lava	Mayen, Germany	1st-2nd	undiagnostic. Heavily burnt
3081		3093	3	5	502	130x50x25-50 refit piece + 25-55	U/S raised kerb style lava quern	4	basalt lava	Mayen, Germany	1st-2nd	estimate diam 380mm -refit rim, heavily burnt
3084		3093	3	4	303	90x63x33-20 (re-fit x3)	prob U/S no kerb	4	basalt lava	Mayen, Germany	1st-2nd	estimate diam 350mm -same stone, heavy burnt
3087 (1)		3093	3	2	49	30 +40	lava quern	4	basalt lava	Mayen, Germany	1st-2nd	undiagnostic - burnt
3087 (2)		3093	3	5	69	55x45x12-15 +	lava quern	4	basalt lava	Mayen, Germany	1st-2nd	undiagnostic worn stone (<20mm thick)+heavy burnt
3090 (1) *		3093	3	1	164	80x65x25	whetstone	3	Pennant Sandstone (U.Carbonif.)	S.Wales?	2nd-3rd?	sub-rectang type with knife grooves, used 2 faces, burnt
3090 (2)	650	3093	3	5	1788	220x140x25-50	U/S raised kerb style lava quern	4	basalt lava	Mayen, Germany	1st-2nd	estim diam 425mm with40mm wide + 50mm thick kerb. Heavily burnt
3098		3093	3	1	123	60x50x25	rim of U/S or L/S quern re-used	3	Millstone Grit	S.Pennines	Roman	estim orig diam 250+, burnt + re-used as a small **anvil**
3029		3027	2	1	46	40x35x30	lava quern	4	basalt lava	Mayen, Germany	1st-2nd	undiagnostic worn, burnt frag

Table 25: Catalogue of worked stone

B.7 Roman Pottery by Katie Anderson

Introduction

B.7.1 A substantial assemblage of Roman pottery was recovered from the Grange Paddocks excavations, totalling 18716 sherds weighing 334.440kg. For the post-excavation assessment, a large sample of the total assemblage was selected for full recording and analysis, based on a list of key contexts which would provide the greatest overview and characterisation of the assemblage, as well as answering context specific questions. In total 5728 sherds were recorded for the assessment, weighing 81225g and representing an estimated 879 vessels (ENV) and 159.84 EVEs (estimated vessel equivalent), which accounts for approximately 30% of the total assemblage by sherd count (*c*.25% by weight). The pottery was fully analysed and recorded in accordance with the Study Group for Roman Pottery guidelines (Perrin 2011).

Assemblage Chronology and Character

B.7.2 The ceramic evidence demonstrates that activity occurred between the earlier and later Roman periods, with its commencement likely to have been in the later 1st century AD (*c*.AD70) and appearing to continue into at least the later 3rd century AD. Based on the relative quantities of material recovered, the pottery suggests a peak in activity in the later 1st-mid 2nd century AD (*c*.AD70-150), after which there was a possible decline. However, since the material analysed for the post-excavation assessment comprises a sample of the overall assemblage, any discussion of variations in intensity of activity (as well as issues of continuity and/or hiatus) should be reserved until more of the assemblage has been recorded. Furthermore, there are a number of contexts which contain pottery of mixed dates, which is unsurprising given the longevity of the site. The earliest dating material dates mid-late 1st century AD (AD50-100), however, there is no evidence at this stage for any transitional Late Iron Age to Early Roman activity, the pottery analysed to date suggests that the site had its origins in the decades following the Roman conquest.

B.7.3 The condition of the assemblage is somewhat mixed, although overall is characterised by small sherds, reflected in a relatively average mean weight of 14.2g. That said, there are numerous examples of refitting sherds which in some cases form semi-complete/near-complete vessel profiles. The majority of the refitting sherds occurred within the same context, with just two examples of cross-context refitting, both of which occur within the same intervention/cut.

Vessel fabrics

B.7.4 Within the sample, a wide range of vessel fabrics were identified (Table 26), with the assemblage dominated by coarseware fabrics, which represent 79.7% by sherd count and 78.6% by weight, totalling 4565 sherds weighing 63860g. The most commonly occurring fabric within this group are sandy greywares (60.2% of coarsewares by sherd count) which includes coarse and fine sandy varieties as well as those with and without silver mica. Within this category the most frequently occurring group are fine sandy

micaceous greywares (1934 sherds, 18284g), occurring in a range of coarseware vessel forms. This fabric group is discussed in more detail below in the fineware section.

B.7.5 Unsourced coarse sandy micaceous wares are the second most commonly occurring coarseware fabric group, totalling 744 sherds weighing 9310g, with micaceous black-slipped wares occurring in similar quantities (694 sherds, 7426g). Grog-tempered sherds account for a further 11.4% of the coarsewares (by sherd count, 9% of the overall assemblage), of which there are five fabric types identified, including varieties with sand and mica, predominantly occurring as large jars. All of this material is Roman, and whilst it is predominately earlier Roman, based on material it was found alongside, it appears to have still been in production and use into the early-mid 2nd century AD. Shell-tempered wares are scarce within the assemblage, totalling just 15 sherds (234g).

B.7.6 Sourced coarsewares represent just 2.3% of the coarsewares (105 sherds, 3237g), of which Verulamium products (Verulamium whitewares and white-slipped wares) are the most frequently occurring (78 sherds, 2416g), which is unsurprising given the relative proximity of the site to the production centre. However, given that a significant percentage of the pottery analysed for the post-excavation assessment was within the period of production for Verulamium wares, it is of note that overall, the number of sherds is low for such a large industry. This may therefore have implications for understanding the precise mechanisms of trade available to the site. The remaining sourced coarseware fabrics were limited in number (Table 26), in some cases potentially representing single vessels. These include Highgate Wood vessels, Nene Valley vessels as well as mortaria sherds from Brampton (Norfolk), Swanspool (Lincolnshire), Mancetter-Hartshill (West Midlands) and Colchester. However, though somewhat limited in number, the range of sourced wares demonstrates that the site had access to a relatively diverse trade network, which is likely to be a result of its roadside position as well as the proximity of the site to the River Stort, thus also taking advantage of waterborne trade.

Code	Fabric	No.	Wt(g)	ENV	EVE
BAETE	Early Baetican amphora	49	1865	0	0
BAETL	Baetican amphora (late)	10	1172	1	0
BLKSL	Black-slipped ware (unsourced)	16	200	8	2.01
BLKSLM	Black-slipped ware - micaceous (unsourced)	890	10114	160	30.95
BRAMP	Brampton ware	1	104	0	0.2
CC	Colour-coat (unsourced)	17	119	2	0.95
CGBLK	Central Gaulish black-slipped ware	1	3	0	0
CGCC	Central Gaulish colour-coated ware	18	81	5	0.93
COLWW	Colchester whiteware	2	244	1	0
CSGW	Coarse sandy greyware (unsourced)	63	1429	11	3.75
CSMGW	Coarse sandy micaceous greyware (unsourced)	745	9330	67	13.36
CSMOX	Coarse sandy micaceous oxidised ware	134	874	6	2.11
CSMRDU	Coarse sandy micaceous reduced ware (unsourced)	56	966	10	2.4
CSMS	Moderately coarse sandy ware with silver mica and common stone inclusions	4	11	0	0
CSOX	Coarse sandy oxidised ware (unsourced)	4	35	1	0
CSRDU	Coarse sandy reduced ware (unsourced)	4	59	0	0.12
CSWS	Coarse sandy white-slipped ware	3	47	0	0
FSBUFF	Fine sandy buff ware (unsourced)	4	145	0	0

Code	Fabric	No.	Wt(g)	ENV	EVE
FSGR	Moderately fine sandy ware with grog?	2	35	1	0.2
FSGW	Fine sandy greyware (unsourced)	5	32	3	0.1
FSMBLK	Fine sandy micaceous black-slipped ware (unsourced)	1	4	0	0
FSMBUFF	Fine sandy micaceous buff ware (unsourced)	1	7	1	0.1
FSMGW	Fine sandy micaceous oxidised ware (unsourced)	2199	22413	330	57.88
FSMOX	Fine sandy micaceous oxidised ware (unsourced)	154	1694	26	2.67
FSMRDU	Fine sandy micaceous reduced ware (unsourced)	134	1890	14	4.9
FSMRW	Fine sandy micaceous ware with common rock inclusions giving lumpy appearance	6	366	0	0
FSOX	Fine sandy oxidised ware (unsourced)	13	96	3	0.29
FSWW	Fine sandy whiteware	16	145	1	2
FSWW	Fine sandy whiteware (unsourced)	16	145	1	2
GBWW	Gallo-Belgic whiteware	9	98	0	0
GROG	Grog-tempered ware	193	9519	11	0.96
GROG2	Very hard fired with moderate large grog inclusions	47	2680	2	0.47
HADBB	Hadham black-burnished ware	5	121	2	0.25
HADOX	Hadham oxidised ware	75	780	8	2.01
HADRDU	Hadham reduced ware	11	262	8	0.75
HOO	Hoo Ware	9	86	0	0
HWB	Highgate Wood B	1	26	1	0
HWC	Highgate Wood C ware	22	325	11	1.86
IMITBB	Imitation black-burnished ware (unsourced)	41	704	28	1.83
KOLN	Cologne Colour-coated ware	3	14	0	0
LONES	London-Essex stamped ware	7	11	1	0.1
LONFW	London style black-slipped fineware	49	251	6	0.8
MANH	Mancetter Hartshill whiteware	1	126	1	0.1
MOSL	Moselkeramik black-slipped ware	1	12	0	0
NGWW	North Gaulish whiteware	3	21	0	0
NVCC	Nene Valley Colour Coated ware	6	51	2	0.1
NVPA	Nene Valley parchment ware	5	66	1	0.18
NVSC	Nene Valley self-coloured ware	1	8	0	0
NVWW	Nene Valley whiteware	1	18	1	0
OXFRS	Oxfordshire red-slipped ware	5	81	2	0.12
QG2	Moderately coarse sandy with moderate grog (1mm)	12	238	1	0
QGM1	Medium sandy fabric with moderate to common very small grog inclusions and mica	83	1242	14	2.14
QGM2	As QG2 but with common silver mica	184	4244	17	3.96
QMC1	Moderately coarse sandy ware with common silver mica and moderate shell	1	16	0	0
QMV1	Moderately fine sandy ware with silver mica and organic voids	8	137	1	0.47
RBMD	Romano-British mica dusted ware	4	28	2	0.1
RS	Red-slipped (unsourced)	3	37	1	0.1
SAM	Samian (unsourced)	14	87	3	0.2
SAMCG	Samian Central Gaulish	106	1773	38	6.6
SAMEG	Samian East Gaulish	44	687	20	2.37
SAMLG	Samian Le Graufesenque	2	19	1	0.2
SAMMV	Samian Les Martres-de-Veyre	2	23	0	0
SAMSG	Samian South Gaulish	69	652	20	2.4
SHELL	Shell-tempered ware	15	234	5	0.41
SWNSWS	Swanspool white-slipped ware	2	24	1	0
TNIM	Terra nigra imitation fabric	4	97	0	0.63
VRW	Verulamium whiteware	44	2013	11	2.75
VRWS	Verulamium white-slipped ware	34	403	2	2.24
WS	Fine sandy ware (usually oxidised) with white-slipped surface	25	184	3	0.22
WSGW	Moderately fine sandy greyware with white slip	6	41	0	0
WW	Whiteware (unsourced)	19	306	3	0.6

Table 26: Quantification of Roman pottery by fabric

B.7.7 Romano-British finewares account for a further 14.4% of the assemblage by sherd count (13.3% by weight), totalling 824 sherds weighing 10790g. As with the coarseware category, this group is dominated by unsourced fine sandy grey and black-slipped vessels which are often the same fabrics as those in the coarseware category, but occur in fineware vessel forms such as platters and beakers. The fine sandy, micaceous greywares represent 32.1% of the finewares (by sherd count), occurring throughout the Roman sequence, although most prevalent in the later 1st-mid/later 2nd century AD. The vessels are the same fabric group as many of the coarseware vessels (considered coarsewares based on vessel form) and are similar in composition to Hadham fabrics, although most of this material appears to pre-date the Hadham production, based on the vessel forms and associated material. However, the similarities in clay fabrics suggest a very similar clay source(s) and/or processing methods, also therefore indicating a very local source for at least some of this material. Indeed, within the broader fine sandy micaceous greyware fabric group (finewares and coarsewares) are five vessels which were noted as being seconds, displaying uneven, 'wonky' rims or large air-bubbles indicative of manufacturing problems. However, these issues would not have rendered the vessels unusable and they would have still been functional vessels, if somewhat lacking aesthetically.

B.7.8 Further unsourced finewares of note include four imitation terra nigra sherds (97g), two of which derive from probable platters. These wares are distinguishable from the other black-slipped finewares by the highly burnished/polished surfaces. Four Romano-British mica-dusted body sherds were also identified 28g), similar in composition to fabrics identified at Skeleton Green (Partridge 1981), suggesting a local source. There are also eight (36g) unsourced colour-coated wares, three of which derive from beakers with barbotine scale decoration.

B.7.9 Within the sourced fineware category, Hadham products are the most commonly occurring, totalling 90 sherds (1138g), with red-slipped, black-burnished and the fine, reduced variants identified. The relative prevalence of Hadham wares is not unexpected, given the sites close proximity to the industry, *c*.5km to the west. It is probably only because the majority of contexts selected for analysis at this stage pre-dating the Hadham industry that these wares do not form a greater component of the assemblage. Similarly, the relatively small quantities of other later Roman finewares (in particular Nene Valley colour-coated wares and Oxfordshire red-slipped wares, six sherds and five sherds respectively), may also be due to the date of the selected contexts, rather than evidence for an almost absence of these wares. It will be of interest to see if this proves correct when more of the assemblage is analysed. London fine wares are moderately well-represented within the assemblage, totalling 49 sherds weighing 251g, with an additional seven sherds (11g) from London/Essex type stamped finewares.

B.7.10 The remaining 5.9% of the assemblage (8.1% by weight) represent imported wares (339 sherds, 6575g), dominated by samian wares, which total 237 sherds weighing 3241g and representing an estimated 82 vessels and 11.77 EVEs. All three regional industries are represented, with vessels from Central Gaul the most prevalent (108

sherds, 1792g), followed by Southern Gaul (71 sherds, 675g) and finally East Gaul (44 sherds, 687g). The samian assemblage is dominated by plainware dishes (in particular forms Dragendorff 18, 18/31 and 31) and to a lesser extent cups (most commonly Dr33 with fewer examples of Dr27). There are however, thirty-seven sherds (667g, ENV12) deriving from decorated bowls, including those with free-style decoration with humans and/or animals depicted. In all cases these comprised small sherds, with only partial vessel profiles remaining. Overall, ten of the samian sherds had the makers stamps, although only three are complete, one of which is too abraded to read. The remaining examples comprise only partial elements of the stamp. Finally, one sherd from a Dr31 dish has a possible graffito 'X' scratched on the interior. The remaining imported wares are predominately from Gaul and include eighteen Central Gaulish colour-coated sherds, eleven whitewares and one Central Gaulish black-slipped sherd. A total of 59 amphora sherds were recorded, all of which are Baetican in origin, with both the earlier and later fabric varieties present. Of note is a complete rim sherd from a Dressel 23 amphora with burnt, oily residue on the interior. The Baetican amphora were used for the transportation of olive oil, to which the residue may relate.

Vessel forms

B.7.11 In terms of vessel forms, the assemblage contains a wide range of vessels (Table 17), although *c*.70% of the assemblage comprises non-diagnostic body sherds, which is unsurprising given the mean weight of the pottery. Focusing on the diagnostic sherds, the assemblage is dominated by jars (43.4% of all diagnostic forms by ENV) representing an estimated 341 vessels. The jars occur in a variety of shapes and sizes from vessels with narrow rims (rim diameters 6cm) to large, wide mouth jars with rim diameters measuring up to 40cm in rim diameter. An additional sixty vessels (ENV) comprise beaker/jars, where there was not enough of the vessel profile to allow for exact form allocation. In total, 53.3% of the jars are decorated, with the most common techniques being combing (49.3% of decorated jars by sherd count) and applied cordons (13.3% by count). Other methods include burnishing, rilling, and tooled decoration. Dishes are also well-represent, with an estimated 141 different vessels (ENV), of which straight-sided forms are the most frequently occurring, accounting for 32% of all dishes by ENV (ENV 45). A further 28.4% of the dishes comprise beaded rim vessels (both rounded and triangular beads), with samian vessels (namely Dr18, Dr18/31 and Dr31) representing 34.5%.

B.7.12 Beakers and bowls occur in similar quantities (84 ENV and 67 ENV respectively). Within the beaker category, dominated by everted rim varieties (ENV 66), of which 67% occur in the unsourced (but likely local) fabric group fine sandy, micaceous greyware. Other forms include carinated, poppyhead, cornice rim and indented beakers, although these only occur in small numbers. A range of bowl forms are present, including beaded bowls (ENV 25), with fewer examples of the Late Roman beaded, flanged bowl (ENV 11) as well as flanged bowls (ENV 7) and reeded bowls (ENV 6). Twelve of the bowls are samian vessels, of which six were identified as deriving from Dr37 vessels. Of particular interest within the bowl category are three rim sherds from three different vessels, with an unusual dropped flange and beaded rim (two from ditch fill 2017 (Ditch **2014**, Phase 2) and one from pit fill 2580 ([Pit Group

2037, Phase 2), one of which has pinprick decoration on the flange. These forms can be paralleled with vessels recovered from the Skeleton Green excavations, approximately 10km northwest of Grange Paddocks, (Partridge 1981: 92, Fig 46.44/45), where these forms are described as being common in the Braughing area but rare elsewhere (*ibid*, 93).

B.7.13 Other vessel forms worthy of note include platters (ENV 26), which a comprise imitations of Gallo-Belgic forms CAM8, CAM12, CAM13 and CAM14. These vessels occur in fine sandy micaceous greyware and black-slipped ware fabrics.

Form	No.	Wt(g)	ENV	EVE
Amphora	59	3037	1	0
Beaker	171	1489	84	11.82
Beaker/jar	93	883	60	4.74
Bowl	110	2451	67	6.13
Bowl/dish	4	79	4	0.31
Closed	555	9249	8	26.62
Cup	33	265	19	2.92
Cup/tazza	20	197	3	1.75
Dish	195	3517	141	11.69
Dish/bowl	1	179	1	0.56
Dish/lid	2	24	2	0
Flagon	34	550	6	3.44
Jar	932	24009	341	45.4
Jar/bowl	1	14	1	0.1
Lid	17	341	15	1.41
Lid/dish	5	84	5	0.44
Mortaria	25	2137	10	2.73
Open	134	1899	3	4.85
Platter	39	975	26	4.05
Unknown	3298	29846	82	30.88

Table 17: Quantification of Roman pottery by vessel form

B.7.14 Approximately 8% of the assemblage (by sherd count) was noted as having usewear evidence, which is relatively high. Types of usewear evidence include sherds with sooting (predominantly exterior, but sometimes on the interior), occurring on 60.8% of all vessels with usewear (by sherd count). A further 38.3% of the sherds with usewear had evidence for limescale on the interior, indicative of being used to hold/boil water, with forty-nine sherds noted as having exterior sooting in addition to interior limescale. Thirteen sherds, primarily comprising samian vessels (eleven sherds), have interiors that are worn from repeated grinding/use. Also of note are two vessels, a beaded rim dish SFB 2504 (**2246**, Phase 2) and a beaded rim bowl (pit **2825**, Group **2825**, Phase 3), which both have three post-firing notches cut into the rims.

Contextual Summary

B.7.15 The pottery sample selected for the assessment report derives from seventy-one contexts representing twenty-eight different feature groups (Table 29). Eight contexts

were noted as containing pottery of mixed date, which is unsurprising given the longevity and intensity of activity over a relatively small excavation area.

B.7.16 The quantities by feature group mentioned below are from the selected assemblage (see Section 2 above for full group totals).

B.7.17 The material derives from pits (37.5% by sherd count), layers including middens (22.1%), ditches (21.4%) and SFBs (17.8%). The largest single assemblage derives from fills (2016) and (2017) within ditch **2014** (Phase 2), totalling 808 sherds weighing 7636g and representing an estimated 100 vessels (ENV) and 20.17 EVEs. The majority of this material dates AD70-120/150, although within fill (2017) there is a small number of slightly later dating sherds. Contemporary with and within the enclosure formed by ditch **2014**, SFB **2246** also contained a very large assemblage of pottery totalling 639 sherds weighing 11629g. That some of the largest dumps of material derived from features outside of the main core of activity and away from the direct roadside is not unexpected, although there are features from along the roadside which contain comparable dumps of pottery, including Phase 1 SFB **2168** (494 sherds, 7974g) and Phase 2 SFB **2686** (380 sherds, 4119g), and the distribution of pottery across the site has interesting implications for understanding more about the function of different areas/zones within the excavation area.

Feature Type	No.	Wt(g)	ENV	EVE
Uncertain	14	504	2	0.74
Ditch	1225	15057	152	33.79
Layer	948	10885	166	31.24
Midden	316	3474	54	4.96
Pit	2144	33945	331	58.18
SFB	1019	15748	166	29.35
Structure	62	1612	8	1.58

Table 28: Quantification of Roman pottery by feature type

Context	Cut	Feature Type	Group	Phase	No.	Wt(g)	ENV	EVE	Context spotdate
2016	2014	Ditch	2014	2	144	1732	18	5.18	AD70-120
2017	2014	Ditch	2014	2	664	5904	82	14.99	AD70-150 - mostly AD70-120 but with some slightly later
2018	2012	Ditch	2012	2	17	422	1	0.36	AD70-150
2034	2033	Pit	2033	2	55	858	9	1.65	AD120-200
2035	2033	Pit	2033	2	40	438	5	1.21	AD120-160
2036	2033	Pit	2033	2	11	128	3	0.7	AD70-150
2038	2037	Pit	2037	2	6	90	1	0	AD50-150
2040	2037	Pit	2037	2	32	327	6	0.41	AD100-200
2041	2037	Pit	2037	2	15	113	4	0	AD120-200
2042	2037	Pit	2037	2	33	227	2	0.37	AD70-150
2044	2037	Pit	2037	2	154	1168	18	1.62	AD150-200 but with earlier residual
2045	2037	Pit	2037	2	3	20	1	0.1	AD70-120
2061	2057	Pit	2057	2	26	547	4	2.01	AD140-200
2062	2057	Pit	2057	2	67	714	11	0.94	AD120-160
2063	2057	Pit	2057	2	140	3078	9	1.86	AD140-200
2122	2121	Pit	2100	2	65	1813	13	3.02	AD120-150, with some earlier
2127	2121	Pit	2100	2	59	2111	10	3.04	AD120-200

Context	Cut	Feature Type	Group	Phase	No.	Wt(g)	ENV	EVE	Context spotdate
2130	2121	Pit	2100	2	3	44	0	0.12	AD50-150
2131	2121	Pit	2100	2	1	4	0	0	AD70-200
2164	0	Layer	2007	4	313	3993	61	12.97	AD120-200 but with lots of earlier RB
2174	0	Layer	2188	4	249	2703	44	6.41	AD250-400
2183	0	Layer	2176	4	92	787	12	2	AD70-150
2194	2393	Pit	2193	2	104	1176	14	1.54	AD100-160 but some later - intrusive?
2197	2196	Pit	2196	3	3	42	0	0	AD200-400
2198	2196	Pit	2196	3	13	208	5	0.71	AD200-400
2204	0	Layer	2007	4	60	802	15	2.78	AD200-400
2206	0	Layer	2007	4	234	2600	34	7.08	AD150-200
2213	2196	Pit	2196	3	8	67	0	0	AD150-300 but with earlier residual
2295	2293	Ditch	2071	2	122	2151	18	5.21	AD200-400
2380	0	Pit	2138	1	45	636	12	1.2	AD70-120
2398	2397	Pit	2350	2	70	1001	12	1.31	AD120-200
2399	2397	Pit	2350	2	52	983	10	2.69	AD120-160
2505	2504	SFB	2246	2	243	3901	41	9.59	AD120-160
2506	2504	SFB	2246	2	26	376	6	0.75	AD100-150
2507	2504	SFB	2246	2	171	3498	38	5.37	AD140-200
2509	2504	SFB	2246	2	199	3854	43	7.75	AD150-200
2580	2579	Pit	2538	1	68	721	8	1.8	AD50-100
2656	2655	Ditch	2743	1	49	515	4	1.53	AD60-120
2659	2579	Pit	2538	1	20	130	0	0	AD50-100
2660	2579	Pit	2538	1	2	20	0	0	AD60-120
2661	2579	Pit	2538	1	13	139	1	0	AD120-160
2662	2579	Pit	2538	1	81	1242	14	1.78	AD100-150
2663	2579	Pit	2538	1	26	433	5	0.52	AD70-120
2664	2579	Pit	2538	1	29	276	1	0.43	AD70-150
2665	2579	Pit	2538	1	18	563	4	0.12	AD70-150
2673	2726	Ditch	2562	1	164	2267	28	5.83	AD70-120
2688	2686	SFB	2686	2	165	1380	18	1.47	AD70-120
2740	2739	Pit	2739	2	10	161	3	0.44	AD150-400
2763	0	Ditch	2071	2	55	1859	0	0.19	AD50-150
2826	2825	Pit	2825	3	21	381	6	1.12	AD200-400
2830	2686	SFB	2686	2	129	1488	11	3.14	AD150-200
2832	2686	SFB	2686	2	58	763	5	0.7	AD70-200
2833	2686	SFB	2686	2	24	339	3	0.47	AD70-200
2835	2686	SFB	2686	2	4	149	1	0.11	AD50-100
2972	3247	Pit	2168	1	231	3409	37	6.31	AD70-120
2973	3247	Pit	2168	1	28	640	5	1.75	AD50-100
2974	3247	Pit	2168	1	65	1154	8	1.37	AD50-100
2976	3247	Pit	2168	1	7	24	0	0	AD50-100
3053	3052	Ditch	2395	5	10	207	1	0.5	AD70-200
3055	3247	Pit	2168	1	41	510	7	1.33	AD50-100
3056	3247	Pit	2168	1	92	1411	6	1.94	AD50-100
3059	3247	Pit	2168	1	16	322	6	0.85	AD70-120
3080	3251	Pit	3093	3	158	2765	33	5.45	AD250-400
3081	3251	Pit	3093	3	213	3851	38	8.47	AD70-200 but some later including 1 med/post-med
3086	3258	Midden	3093	3	316	3474	54	4.96	AD250-400 but with earlier residual
3139	3247	Uncertain	2168	1	9	381	1	0.42	AD70-200
3140	3247	Uncertain	2168	1	5	123	1	0.32	AD70-150
3252	3251	Structure	3093	3	8	205	2	0.53	AD70-150

Context	Cut	Feature Type	Group	Phase	No.	Wt(g)	ENV	EVE	Context spotdate
3253	3251	Structure	3093	3	25	753	5	0.95	AD70-150
3254	3251	Structure	3093	3	22	509	1	0.1	AD70-150
3255	3251	Structure	3093	3	7	145	0	0	AD60-150

Table 29: Quantification of Roman pottery by context

Statement of potential

B.7.18 The pottery recovered from the excavations represents a substantial assemblage, from what is a relatively small excavation area. The pottery suggests activity began in the decades following the Roman conquest and continued into the later Roman period, although based on the material selected from analysis at this stage, the site peaked during the later 1st-mid/later 2nd century AD.

B.7.19 The pottery is able to provide an important insight into the nature of trade to the site and the range of fabrics and forms certainly highlights roadside sites as having access to more diverse networks. Furthermore, it seems highly likely that the site was also making good use of the river as well as the roads.

B.7.20 In many ways the material is indicative of typical domestic activity, with a coarseware dominated assemblage. However, the sheer quantity of pottery recovered from the site, even when considering the apparent longevity as well as its roadside position, indicates intensive activity akin to urban levels of occupation. The relatively high percentage of sherds with usewear evidence is noteworthy and appears to be higher than those recorded at other site types, indicating activity beyond the normal domestic sphere, potentially providing evidence for commercial activity.

B.7.21 Certainly, the greatest potential of the pottery is in characterising a pottery assemblage from a Roman site along a major routeway. Furthermore, the potential to explore differences between material deposited in features immediately adjacent to the roadside versus those set further back offers an insight into exploring the functions of different areas of the site.

Recommendations for further work

B.7.22 Approximately 30% of the assemblage has been recorded and whilst it is recommended that more of the assemblage should be recorded for the grey-literature, it is not necessarily the case that all of the remaining pottery needs to be fully recorded. Certainly, in the case of very large contexts, and/or contexts from feature groups already partially analysed, further sampling may be more appropriate than full recording. Likewise, contexts where there is likely to be a high degree of residuality or intrusion have limited use beyond characterisation of fabrics and forms.

B.7.23 Focus should also be on features within different areas/zones to establish if the ceramic assemblage from the immediate roadside is the same or different from those features located further away. This may help to identify areas of specific activity types. Residue analysis should be considered for any burnt residue.

B.7.24 The final site phasing, when all stratigraphic evidence and datable material has been incorporated, can be used to establish which earliest and latest dating contexts may require full analysis. Likewise, evidence from other specialist reports may also highlight any contexts/features which would be worthwhile recording in full.

B.7.25 Once all of the recording is completed, full analysis including by site phase will be necessary to establish if the apparent peak in activity identified at this stage is a true reflection of the site's chronology.

B.7.26 Spatial analysis of the material across site would be beneficial, in order to determine where the largest concentrations of material were occurring, and whether there is any patterning in the distribution of material in terms of chronology and function. In particular it would be interesting to see a spatial distribution of the pottery with the usewear evidence to see if there are certain areas of the site that may reflect commercial rather than domestic activity.

B.7.27 Finally, further work comparing this assemblage to other contemporary assemblages should be undertaken, in particular other roadside settlements.

B.8 Fired Clay by Simon Timberlake

Introduction

B.8.1 A total of 10.5kg (1415 pieces) of fired worked daub was recovered from this site. Just 125g (2 pieces) of this consisted of small (unidentified) worked clay items whilst another 1.4kg (estimated) appeared to be associated with the construction of a moulded clay pedestal base for either an oven or a kiln. The assemblage included a significant component of structural daub (wattle and daub panel), with up to 6.8 kg of the latter material recorded.

B.8.2 A full catalogue inventory of the fired clay is provided at the end of this report (Table 30).

Methodology

B.8.3 The worked and fired clay was identified visually using an illuminated x10 magnifying lens. Brief fabric descriptions of these were undertaken. A dropper bottle containing dilute hydrochloric acid was used to confirm the presence or absence of calcite in the rock.

Basic description and interpretation of the fired clay assemblage

B.8.4 A total of 10,459g of fired clay was recorded. Apart from 125g of this which may have been from fragments of as yet unidentified loomweight, all of this fired clay was composed of various sorts of daub.

B.8.5 The largest component (6828g) consisted of burnt, broken-up, and sometimes weathered pieces of wattle and daub, all of this most probably derived from internal and external wall panels of what were possibly timber-framed structures. Many of these pieces were moderately well-preserved and a number large enough to be able to determine their structure. Two particular clay fabric types (Fabrics C and E) can be linked to this, most of which seems to consist of a 'plaster' applied to the exterior and interior faces of a horizontal 8-12mm diameter round stick weave (composed of hazel?) undertaken upon larger split stick uprights of between 30-50mm diameter. Only the impression of this stick weave survives upon the inside face(s) of the pieces. The thickness of these wall-daub fragments either side of the weave suggests an external coat of around 30mm of daub and an internal one of about 40 mm (equivalent to a total wall width of around 90-100mm). Clearly this wall thickness must vary, but the estimate obtained was based upon a number of different examples.

B.8.6 Much of this structural daub is both burnt and sooted, in particular upon the actual wall surfaces themselves, suggesting that the 'buildings' were either burnt *in situ*, or else the wall panels themselves were ripped off and burnt within a bonfire.

B.8.7 The largest amounts of this structural daub (Fabric C) came from contexts 2199 (Layer 2176) (3020g) and 2466 (layer 2188) (1753g), both of these layers being associated with Phase 4, therefore 3rd century AD in date. A slightly different type of structural daub (Fabric E) was associated with the midden context 3087 (within SFB **3093**) (174g)

which was of 2nd-3rd century date Phase 3). Meanwhile a (300g) piece of painted wall daub (Fabric E) possessing traces of a limewash coat was recovered from a pit fill context 3209 (Pit Group **2350**) dating to the 2nd century AD (Phase 1).

B.8.8 The 1386g of oven or kiln daub wall material was identified chiefly by the degree of (red coloured) oxidation and firing present upon some of the surfaces, the latter suggesting persistent and repeated heating. Some of this daub of course may be associated with open hearths, and some of it may be represented by a number of different fabrics. Mostly however this has been interpreted as fragments of daub-built oven or kiln superstructure. Fabric B is perhaps the most typically represented example in this case, although Fabrics D and F appear also to have been used. Examples of these from contexts 2687 and 2833 have been dated to Phase 1, that is to the mid-1st to 2nd century AD. However, the incidence of this is likely to be more varied.

B.8.9 Perhaps associated with (or at least functionally-comparable) with the above is the evidence for moulded structure(s) associated with either ovens, kilns or hearths; in this case pieces of what appear to be moulded pedestal bases or else floors for the above (total weight of identifiable fragments = 870g). Most typically these 'structures' appear to have been made from Fabric A. The largest and most diagnostic pieces of this come from the same SFB fill context as the oven daub above, *i.e*. context 2687. Some 677g of finely-moulded daub recovered from this appears to suggest the construction of a 'pedestal' of at least 250mm diameter and 60mm tall which had been repeatedly fired/ used.

B.8.10 The very small amount of worked clay associated with the making of as yet unidentified objects included one possible circular – flat perforated loomweight (29g) recovered from a posthole fill context [2918] dating to the 2nd-mid 3rd century AD and an unidentifiable 'moulded lump' (64g) from layer context 2164 dating to the 3rd century AD.

B.8.11 The remaining 950g referred to as other daub (see Chart 4) could not be provisionally assigned to any possible function, and was probably composed of most or all of the different clay fabric types identified. Such generic daub was probably 'structural' in the broadest sense, and reflects the predominance of the use of this as a building material on site, perhaps in association with timber-framed dwellings.

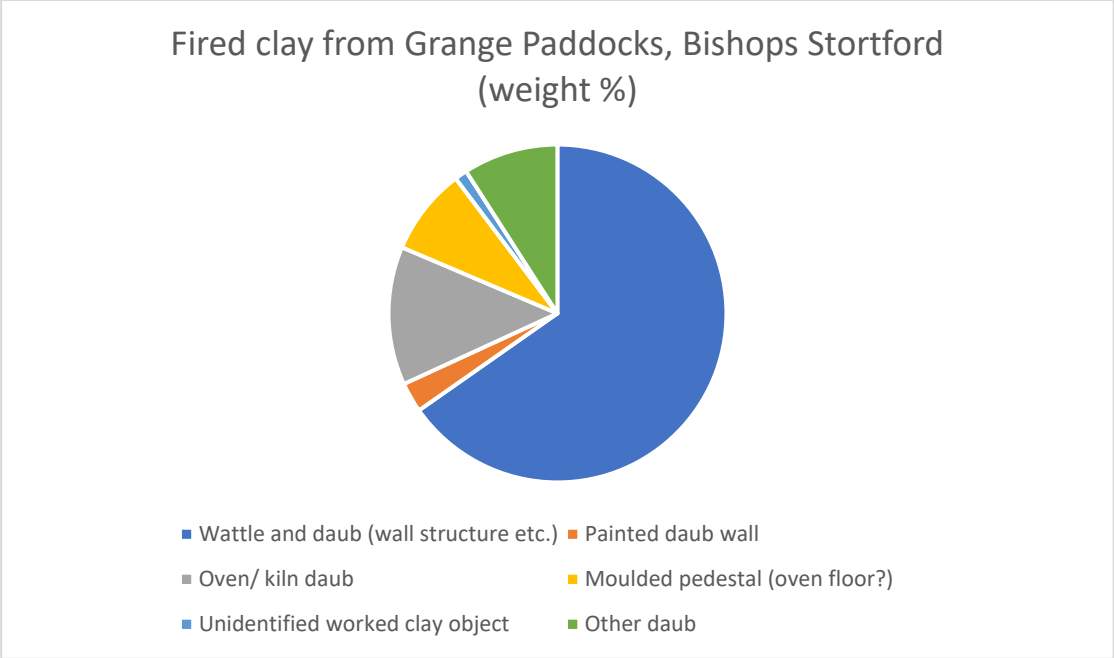

Chart 4: Fired clay by type

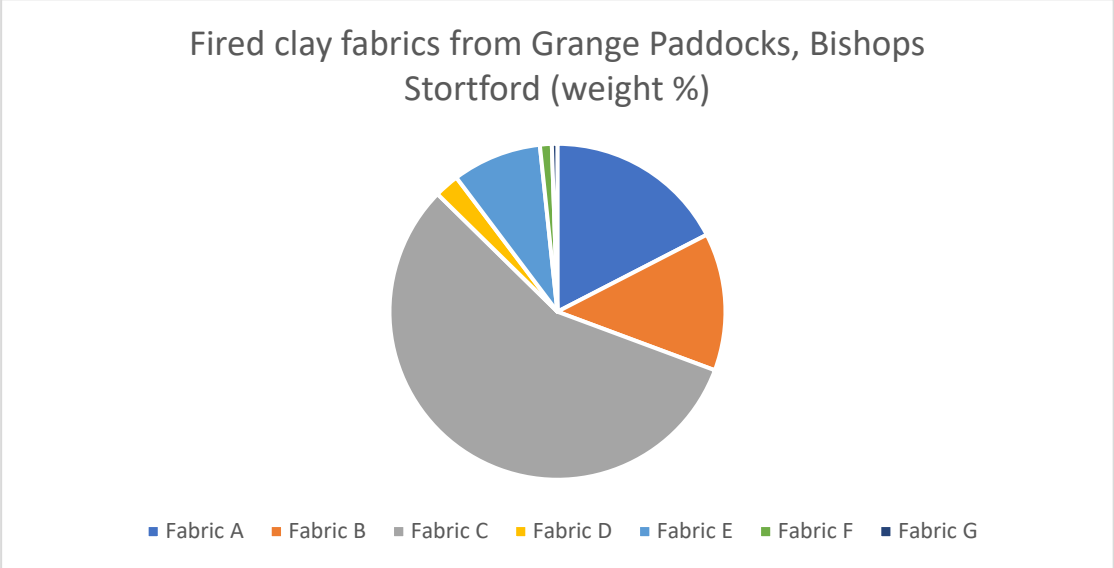

Chart 5: Fired clay fabrics

Fired clay fabrics

B.8.12 The proportions of the different clay fabrics encountered are indicated graphically in Chart 5 above. Provisional fabric analysis (descriptions) suggest the following types:

Fabric A A grey-red streaky clay with chalk grit, marl-rich grog, small flint pebble (<10mm) and organic (orig straw?) inclusions (1821g).

Fabric B A light pink streaky clay with frequent pellets of chalk (<10mm) and minor organic plus rare patinated flint (<15mm) inclusions (1386g)

Fabric C A brick red sandy-silty and slightly micaceous clay fabric with crushed flint, round quartz grit, minor organic and impressed wattle stick (5929g)

Fabric D Variegated pink sandy-gritty clay with inclusions of unpatinated flint and chalk (<5mm) (248g)

Fabric E A sandy fabric with minor quartz and chalk grit and much organic (straw impression etc) (899g)

Fabric F Hard-fired pink clay with minor chalk inclusion (120g)

Fabric G Light and fine sandy dark grey fabric with organic and fine chalk inclusions (56g).

Questions to address and further work required

B.8.13 Once a final site distribution plot of the fired clay/ daub has been compiled, it will be possible to analyse this large assemblage in more detail and to compare the results of this with the data from across the excavation area and with data from other similar sites.

B.8.14 Some specific questions need to be addressed when further examining this material. One of them will be to focus on the problem of properly distinguishing between different fabric types and then relating this to a manufacturing method as well to the different sources of clay and temper used. For instance, there may be other as yet unrecognisable fragmentary worked clay objects although the clear paucity of loomweight fragments indicates that textile production was not a major activity at this site.

B.8.15 It will also be important to check whether some of this fired clay relates to metalworking, and in particular ironworking hearths. Whilst there seems to be little clear correlation between these fired clay-containing contexts and those containing slag, both categories of material are found within contexts 2076 (Pit Group **2109**, Phase 1), 2204, 2205 (layer 2007, Phase 4)and 3087 (SFB **3093**, Phase 3). Analysis of this fired clay (daub) using pXRF may help to resolve the question of whether or not there is a metallurgical connection.

B.8.16 There may well be a case here for a more detailed petrographic examination of some of the worked clay objects as a means to better distinguish between the various types and dates. Thin-section slides of these fabrics can be prepared for examination, as has recently been done at the Roman site at Priors Hall, Corby.

B.8.17 Material recommended for illustration has been indicated as such within the appendix.

Retention, Dispersal and Display

B.8.18 In the meantime all of the material (listed within the accompanying inventory) should be retained.

Context	Group	Phase	Nos. piece	Dimension (mm)	Wt (g)	Fabric	Inclusions	Identity	Period	Notes
2007	2007	4	4	35x25x50 + 10-26	43	**A**?	chalk + impress stick	structural?	RB	slightly weathered
2008	2188	4	2	25-30	18	**G**		wattle + daub?		
2010 (2)	2109	1	4	25	10	**A**				small crumbs
2011	2109	1	1	30x25x15	14	**B**			RB	
2016 (1)	2014	2	1	60x50x15	48	**D**	fine mica	oven floor?	RB	strongly polished and scored
2016 (2)	2014	2	4	20-22 + 20-25	14	**C** (7g) + **B** (7g)				
2017	2014	2	9	50x30x23 +	73	**E** (45g) + **B** (6g) + **C** (17g)			oven fl daub	all quite weathered lumps
2041	2514	1	2	50x22x30 +30	26	**B**				
2055	2188	4	1	50x55x30	62	**E?**				
2056 (1)	2188	4	6	65x50x30 (thick) + 30 + 25	108	**C** (6g) + **B** (55g)			RB	all daub as quite weathered lumps
2056 (2)	2188	4	3	50x55x25 +30 + 22	69	**B** (54g) + **C** (7g)			RB	weathered pieces
2065	2079	1	1	40x40x25 (thick)	31	**B**				
2066	2079	1	1	35	10	**E**	sandy+ VT			weathered
2075	2109	1	4	80x30x18	43	**A**?				
2076 (1)	2109	1	3	50x30x40 (thick) + 35 + 40	53	**A** (11g) + **B** (42g)				
2076 (2)	2109	1	3	25 - 35	20	**G** (10g) + **E** (10g)				
2082	2081	2	1	35	11	**D**				
2099	2007	4	6	55x30x20 (thick) + 30-40	81	**A** (74g) + **B** (7g)		incl x1 flat-pedestal	RB	
2116	2111	2	2	10-20	5	**B**				
2157	2007	4	4	20 - 40	28	**E**		wattle + daub	RB	
2158	2007	4	1	25x30x15	12	**B**?				

Context	Group	Phase	Nos. piece	Dimension (mm)	Wt (g)	Fabric	Inclusions	Identity	Period	Notes
2164 (1)	2007	4	4	55x45x25 + 50x45x30 + 25x20x40 (thick) + 30	113	**C** (26g) + **E** (87g)	Fabric E: minor quartz + chalk grit but much VT	oven daub + wattle/ daub	RB	
2164 (2)	2007	4	1	75x60x40	96	**A**?	chalk			crudely mould 'round ' lump
2170	2168	4	1	35x25x10	11	**B**				weathered lump
2177	2176	4	1	30x25x20	20	**C**				weathered lump
2179	2176	4	1	22	5	**C**				
2181	2176	4	1	22	7	**C**	stick impress	wattle		
2189	2188	4	3	12-25	11	**B**				weathered pieces
2194	2193	2	2	40x35x20 + 25	38	**B**				
2198	2196	2	4	15-25	12	**B**				weathered lumps
2199 (1) *	2176	4	29	50x40x35 +50x45x20 + 50x35x30 + 45x25x20	517	**C** (brick-red sandy silty and slight micaceous)	round flint grit	wattle + daub structural	RB	uneven exterior – prob 35-40mm thick ext to wattle. Burnt, sooted + weathered
2199 (2)	2176	4	2	30x22x20 (thick)	20	**C**		wattle + daub		
2199 (3) *	2176	4	75	70x70x30 (largest) to 15x20x20 (smallest)	1083	**C**	round to angular patina flint + stick	wattle + daub	RB	20mm thick ext to wattle. Weave round 10-12mm
2199 (4)	2176	4	c.75	50x60x35 (largest)	1400	**C**		wattle + daub		30mm thick inside wattle. Weave round stick 10mm
2205	2007	4	9	60x55x35 + 35x35x10 +40x35x35	157	**A**			RB	
2206	2007	4	5	55x60x23 + 35-40	111	**B**	chalk + flint		RB	
2254	2246	2	1	40	6	**A**				

Context	Group	Phase	Nos. piece	Dimension (mm)	Wt (g)	Fabric	Inclusions	Identity	Period	Notes
2363	2071	2	1	45	13	**C**		structural daub		surface moulded skim
2399	2350	2	1	50x20x10	15	**E**			RB	
2411	2007	4	1	30	11	**C**				weathered lump
2412	2007	4	1	60x55x25	66	**A**	more organic (straw etc)	oven base?	RB	
2416	2007	4	1	30x20x40	23	**C**		wattle + daub	RB	11mm diam sail impress
2431	2007	4	1	25x20x30 (thick)	16	**C**		wattle + daub	RB	
2436	2007	4	1	55x45x20	60	**D**	pale buff col: mica		RB	racked from re-firing of piece within fire
2442	2176	4	4	45x30x25 + 25x30x40 (thick) + 20 + 35	76	**C**	unpatinated flint grit	wattle + daub		impress sail (20+ mm) c. 10mm below sext surface
2445	2176	4	1	55x30x18	27	**B**				
2446 (1)	2176	4	86	20-65	1753	**C**	stick impression + patin fl gravel+ VT	wattle + daub		10mm to exterior + 20mm+ to interior (40mm+ thick wall)
2447 (1)	2176	4	8	35x30x25 (thick) + 10-30	64	**C**		wattle + daub		
2447 (3)	2176	4	1	35x25x20	14	**E**	grit + stick impress	wattle + daub		10mm diam round tight weave
2478	2188	4	1	30x25x25	20	**C**				
2448	2176	4	2	50x50x38 + 40x35x25	103	**A**	organic + flint		RB	weathered pieces
2451	2176	4	6	55x40x30 + 25-40	96	**C**	stick impress	wattle + daub		internal wall frag (30mm)with 16mm round (hazel) impress
2473	2188	4	1	35x25x17	14	**C**				weathered piece

Context	Group	Phase	Nos. piece	Dimension (mm)	Wt (g)	Fabric	Inclusions	Identity	Period	Notes
2505	2246	2	3	75x70x40 + 25-30	178	**B**	chalk		RB	burnt + cracked exterior
2507	2246	2	1	40x30x25	30	**E** sandy	VT		RB	
2527	2350	2	3	40x35x25 +30 + 40	38	**B**			RB	
2536	2196	3	1	40	9	**B**				weathered lump
2580	2037	2	4	365x35x30 + 15-25	31	**B** (25g) + **C** (5g)	chalk (B)		RB	
2586	2383	2	1	90x60x45	120	**B**	chalk + rare patina flint (<15mm	oven daub?	RB	uneven exterior – slightly weathered piece
2662*	2037	2	6	70x45x45 + 65x45x35 + 45x30x50 +40x35x25	188	**B** (pink-buff : chalk and minor VT)	irreg chalk lumps	oven daub?	RB	uneven exterior – slightly sooted + cracked (fire burnt
2662	2037	2	2	20x25x15 + 15	12	**G** (light fine sandy dark grey)	VT and fine chalk			
2663	2037	2	1	90x50x13	89	**D**	fine silty mica	daub surface	RB	daub surface layer re-fired within fire
2664	2037	2	1	25	8	**B**				
2665	2037	2	5	10-20	11	**B**				
2681	2057	2	1	35x30x20	16	**A**		oven base pedestal?		
2687 (1)*	2686	2	5	120x50x60 (thick) +100x55x60+35-25	588	**A** (grey-red streaky: fl + chalk + marl grog + VT)	chalk grit + straw + flaky clay + flint peb (<10mm)	oven base pedestal?	RB	x2 adj but not re-fit pieces of rim of circular disc pedestal (well-mould) c. 250mm diam
2687 (2)	2686	2	3	65x45x20 + 55x30x12 + 50x45x15	89	**A**		oven base pedestal?	RB	
2687 (3)	2686	2	5	70x65x35 (thick) + 45-25	158	**B** (light pinkish streaky:freq chalk)	pellets of chalk (<10mm)	oven daub?		

Context	Group	Phase	Nos. piece	Dimension (mm)	Wt (g)	Fabric	Inclusions	Identity	Period	Notes
2688	2686	2	1	40x40x25	57	**A**		oven daub		re-fired within fire
2832	2686	2	4	45x35x25 + 45x30x15	62	**F** (hard-fired pink clay)	with chalk			
2833	2686	2	5	60x20x40 (thick) + 60x30x20	132	**F + A** (73g)	chalk + VT	oven daub		re-fired within fire
2838	2287	5	1	40x20x45+ (thick)	35	**A**			RB	
2918*	2050	3	1	35x40x20	29	**E**	VT	moulded	RB	circular/flat + perforated - part of **loomweight**?
2972	2168	1	4	30	46	**C** (16g) + **E** (29g)	impressed wattle	wattle + daub	RB	both fabrics are structural wattle+ daub with split hazel
2973	2168	1	1	45x50x15	25	**D** (variegated pink sandy/gritty)	unpatinated flint + chalk (<5mm)	oven floor?	RB	sooted top which is polished smooth from abrasion
2978	2825	3	1	30	5	**C**				
3017	2168	1	2	35 + 45	23	**A**			RB	
3039	2979	1	1	30	9	**B**				
3053	2686	2	4	70x35x15 + 15+35 + 65x40x30 + 25	110	**A** (47g) + **B** (61g)	B with organic as well as chalk		RB	
3056 (1)	2168	1	1	55x40x15	26	**A**			RB	
3056 (2)	2168	1	1	50x15x35	22	**C**		wattle + daub	RB	impress of hazel? sail 17mm round
3066	2168	1	1	42x35x17	28	**B**				
3075	2165	2	7		67	**C** (10g) + **A** (57g)				undiagnostic pieces
3084 (4)	3093	3	2	30x30x35 + 40x35x30	58	**E**	x1 VT straw+stick	wattle+db	RB	
3086	3093	3	9	50x40x30 + 50x35x30 30x45x25 +40x35x23	141	**A**	few inclusions		RB	undiagnostic – but same fabric as 2687 (2)

Context	Group	Phase	Nos. piece	Dimension (mm)	Wt (g)	Fabric	Inclusions	Identity	Period	Notes
3087 (1)	3093	3	2	45x45x40 (thick) + 30x40x22	110	**E**	grey flint pebble <(<10mm)			
3087 (2)	3093	3	2	40x20x40 (thick) + 50	64	**E**				
3092	3091	6	1	40x40x20	30	**B** (variegated streaky)	chalk			weathered lump
3138	2168	1	1	50x40x30+ (thick)	48	**A**		oven base pedestal?		flat top (sooted) surface
3148	2686	2	1	35x30x13	16	**C**		wattle + daub	RB	
3151	2686	2	1	30x25x10	10	**C**	mica			
3155	2291	3	2	30x30x15 +20	24	**D** (15g) + **C** (9g)				
3158*	2686	2	25	80x50x32 + 65x40x40 (thick) + 55x30x30 +40x40x40 +50x25x20	610	**C** (brick-red: sandy with mod qtz grit + crush fl)	minor round quartz and flint, minor VT and impress wattle	wattle + daub structural	RB	strongly burnt with split hazel rod (up to 50mm diam) and round wove sails (10-15
3164	3093	3	2	50x30x20 + 40x30x25	41	**E**			RB	
3168 (1)	2168	1	1	26x25x12	12	**A**?				
3168 (2)	2168	1	1	50x40x33	39	**B**				weathered lump
3209 (1)	2350	2	1	90x60x50 (thick)	300	**E**	sandy + VT	daub wall limewash		impress large round upright (30mm) + thin limewash coat (resid) on wall surface
3262	3093	3	1	20x20x45 (thick)	16	**G**		wattle + daub?		
3263	3093	3	1	23	6	**E**				

Table 30: Catalogue of worked + unworked fired clay

B.9 Ceramic Building Material by Simon Timberlake

Introduction

B.9.1 Some 49kg (x 310 pieces) of CBM was recovered from this site. This consisted of fragments of Roman box-flue and other hollow flue tile, undifferentiated *pila* tile brick, pila *laterculus*, *lydium*, *bipedalis* and *sesquipedalis*(?) bricks, *imbrex* and *tegula* and other 'flat' roof tile, undiagnostic Roman tile/brick, *tessara* and mortar. There were also a few fragments which may relate to a Late Saxon floor. A full catalogue inventory of this CBM assemblage has been provided in Table 31 (below).

Methodology

B.9.2 All the CBM was identified visually using an illuminated x10 magnifying lens. A dropper bottle containing dilute hydrochloric acid was used to confirm the presence or absence of calcium carbonate, such as in the mortar. Standard reference texts (*e.g.* Brodribb's *Roman Brick and Tile*) were employed to categorize types.

Catalogue and description of CBM

B.9.3 Of the 49,078g of CBM recovered, virtually all was identifiably Roman in origin, although much of this was fragmented, and up to 25% of the smaller pieces weathered and abraded. A significant amount of this however was fresh and pristine, although often burnt, sooted and broken up. It can be concluded therefore that this represents a Roman brick and tile assemblage which was discarded and dumped, but which for the most part was probably in its primary depositional context.

B.9.4 Most of the flue tile consisted of sooted undecorated and (parallel comb/chevron design) decorated box flue and other flute-joined flue tile pieces (2314g (x 30 fragments; MNI=22). Other hypocaust-related CBM included up to 54 pieces (MNI=35) of undifferentiated pila tile brick (total 9511g), together with identifiable fragments of besalis laterculus (x8 (MNI=7) 3671g), lydium (MNI=1 (2415g)), bipedalis (MNI=1 (1271g)) and sesquipedalis (MNI=1 (627g)) bricks. In addition, a further 5294g of unidentifiable Roman tile and brick was recorded.

B.9.5 However, most of the Roman CBM consisted of roof tile. This included 17894g of tegula (122 fragments (MNI=90 pieces)), 4385g of imbrex (36 fragments (MNI=25 pieces)), and 1233g of flat roof tile.

B.9.6 Some 434g (MNI=2) of possible ceramic floor tile was identified on the basis of its wear and fabric type. In addition there was a single unused tessera (19g) made from a Roman tegula roof tile.

B.9.7 Just one small fragment of burnt lime/ lime mortar (10g) was recovered from context 2062 (Pit Group **2057**, Phase 2).

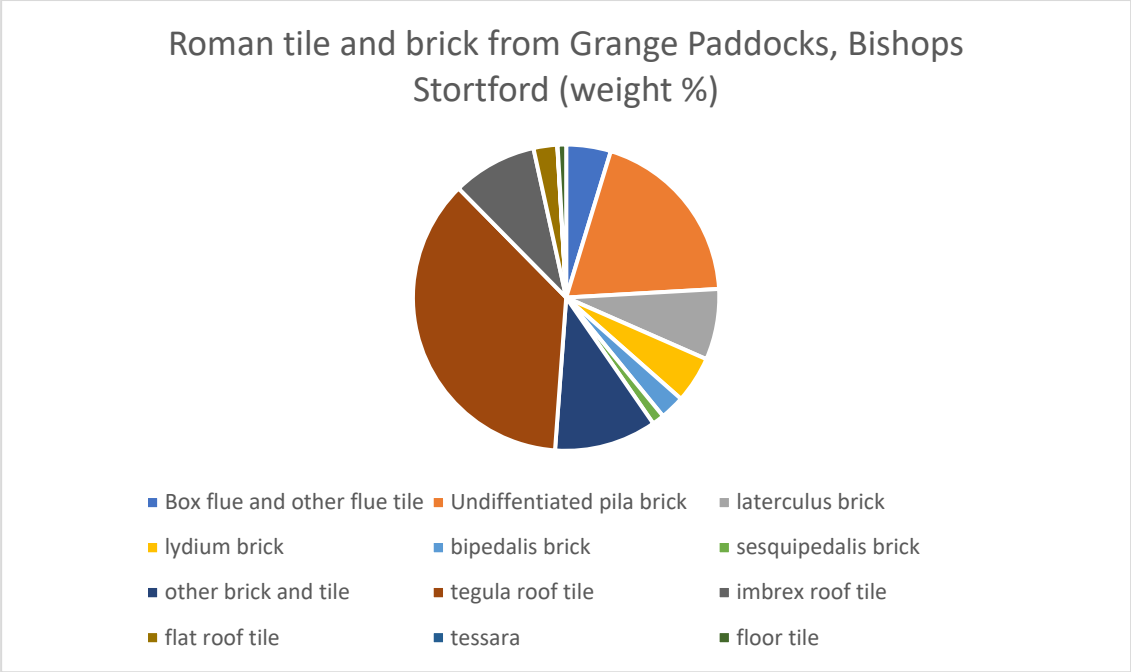

Chart 6: Breakdown of tile and brick CBM type

B.9.8 At least eight different brick and tile fabrics (RE1-8) have been recognised across the whole ceramic assemblage (see Table 31).

B.9.9 The largest amounts of tile and brick were recorded from contexts 2459 (6071g, Layer 2176, Phase 4), 2199 (4224g, Layer 2176, Phase 4), 3086 (4021g, SFB **3093**, Phase 3), 2618 (3575g, Pit Group **2613**, Phase 1) and 2008 (2440g, Layer 2188, Phase 4). Most was associated with 3rd century AD contexts (*i.e.* 12.7 kg from 2459, 2199 and 2008 combined), although 4021g came from a 2nd to mid-3rd century AD context (3086) and 3575g from a mid 1st to 2nd century context (2618). The significance of these differences cannot really be assessed at this point, and the assemblage therefore will need to be re-examined.

B.9.10 Variations have also been noted amongst the very large number tegula tiles, including the shape and size of the flanges, intentional cut-aways in the latter linked to roof design and fitting, the presence of single or double shallow grooves along the tile flange joins, and the presence of what are fairly typical single or double finger-drawn concentric designs upon the upper tile surfaces (Brodribb 1987, 14-17).

B.9.11 Re-use of tile includes the fabrication of a tessera cube (context 3102 (Pit Group **2825**, Phase 3)) from a broken tegula tile as well as the fabrication of a pot lid (crudely chipped to a disc of around 70x75mm) from another (context 2174 (Layer 2188, Phase 4)).

B.9.12 The survival here of such a large and (relatively) unweathered fragmented assemblage of Roman tile and brick is interesting in that the presence of roof tile implies the existence of moderately high status timber buildings, whilst the abundance of tile brick for the purposes of suspended flooring, and the use of a hypocaust system, suggests that the presence of more than one high status building such as a villa or a bathhouse within the near vicinity.

Further work required

B.9.13 The provision of a site distribution plot for all the categories of tile and brick will be necessary to properly analyse this moderately large assemblage and to compare the results of this with data from other sites.

B.9.14 Further study of some of the tile may be necessary, given that some of the identified 'flat Roman roof tile' needs to be better understood, as does the nature of the as yet unidentified tile and brick.

B.9.15 A study of the changes in tile (chiefly tegula) type over the period of the settlement will be possible through a closer examination of the CBM from the different phases, as will a better understanding of the location and form of any building structures being the probable source(s) of this roofing material and hypocaust brick.

B.9.16 At least 14 pieces have provisionally been selected for illustration, although this list will need further prioritising.

Retention, Dispersal and Display

B.9.17 Disposal of (some) of this material should only be considered following the above recommended work.

Context	Group	Phase	Nos.	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
2001	2001	Sub	1	140x90x17	303	RE2		*tegula*	Roman	non-diagnostic fragment – not weathered
2003	2002	1	1	100x75x40	2452	RE5		uncertain		very weathered + rolled brick fragment
2007	2007	4	1	40x45x30	47	RE1		*tegula*?	Roman	undiagnostic piece
2008 (1)	2188	4	1	100x75x20	2008	RE1		*tegula*	Roman	flat piece with concentric groove deco
2008 (2)	2188	4	1	80x50x20	91	RE1		*imbrex*	Roman	
2008 (3)	2188	4	1	80x55x15	100	RE2		box flue tile?	Roman	NB horiz parallel score lines along thin edge
2008 (4)	2188	4	1	70x30x35	62	RE4		*pila* tile brick	Roman	NB soot and scorch marks on one face
2008 (5)	2188	4	7	25-55	144	RE3/ 4		uncertain	Roman	tile frags
2008 (6)	2188	4	2	40	22	RE1		uncertain	Roman	tile flakes

Context	Group	Phase	Nos.	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
2008 (7)	2188	4	1	30x40x5+	13	RE2		uncertain	Roman	tile flake
2010 (1)	2109	1	5	50x70x23	95	RE5 /1		*tegula*	Roman	concentric groove decorat
2025	2026	2	1	45x40x20	53	RE1		*tegula*?	Roman	undiagnostic piece
2048 (1)	2188	4	1	70x60x30	186	RE1		*pila* tile brick	Roman	sand gritted parting sf
2048 (2)	2188	4	2	80x55x20 + 80x44x20	179	RE1 + RE5		*tegula*	Roman	min x2 diff tiles: one with concentric decor
2048 (3)	2188	4	2	40-70	35	RE1		*imbrex*	Roman	v small frags : min x2
2048 (4)	2188	4	1	45x40x15+	32	RE5	sandy	box flue tile?	Roman	frag with parallel line
2055 (2)	2188	4	2	55x40x23	71	RE4	grog	*tegula?*	Roman	poorly diagnostic frag
2055 (3)	2188	4	1	35x30x30+	40	RE2		*pila* tile brick?	Roman	poorly diagnostic frag
2058	2057	2	1	60x60x20	100	RE5		*tegula*?	Roman	undiagnostic piece
2062	2057	2	1	35	10			mortar?	Rom?	burnt lump limestone assoc with mortar?
2063 (1)	2057	2	27	55x40x15 (thick) ++	300	RE4	light brown silty + micac – no inclus	possibly floor tile?	Rom?	highly burnt (re-burnt) and fragmented
2063 (2)	2057	2	1	60x70x40	251	RE1		*pila* tile brick var *besalis laterculus*	Roman	slight thumb-flanged rim
2063 (3)	2057	2	1	60x30x15	31	RE4		possibly floor tile?	Rom?	burnt
2065	2079	1	1	40x45x22	56	RE1		*tegula*?	Roman	undiagnostic
2066 (1)	2079	1	2	100x45x30	153	RE2		*pila* tile brick?	Roman	thin tile brick - weathered
2066 (2)	2079	1	1	50x30x12	23	RE4		*imbrex*	Roman	weathered frag
2076	2109	1	2	100x75x17 + 85x70x15	202	RE6 + RE4	RE6 buff-col finely	*imbrex*	Roman	both rounded + flatter forms

Context	Group	Phase	Nos.	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
							micac laminate			
2103	2100	2	1	65x80x30	119	RE1		possible *tegula*	Roman	line decorated -uncertain
2104 (1)	2100	2	1	120x90x4 (1.5" thick)	604	RE1	voids	*pila* tile brick var *besalis laterculus*	Roman	15mm wide slight impressed border to upper edge NB faint traces of lime mortar
2104 (2)	2100	2	2	110x70x35 + 90x60x35	455	RE1	reduced interior	*pila* tile brick	Roman	thinner and diff type to above
2104 (3)	2100	2	1	65x60x10	48	RE2		fragment of *imbrex*	Roman	thin
2104 (4)	2100	2	2	50x50x15 + 35	94	RE1		fragment *tegula*	Roman	
2104 (5)	2100	2	1	60x50x40	117	RE1		*pila* tile brick	Roman	small fragment with burnt top surface
2159	2007	4	3	30-50	17	RE1		uncertain	Roman	poss flakes from underside roof tiles
2163	2007	4	1	60x50x45	129	RE1		*pila* tile brick	Roman	small fragment
2164	2007	4	3	40+45+45	97	RE4+ RE5+ RE2		*tegula*	Roman	small flange frags (x3 diff tiles)
2172 (1)	2686	22	2	135x70x25 + 100x60x20	442	RE1 + RE2		*tegula* tiles	Roman	frags from centre of two diff tiles NB 1 concentric design
2172 (3)	2686	2	1	55x50x20	60	RE4		uncertain		weathered brick fragment
2173	2188	4	1	110x70x20	201	RE1		fragment of *imbrex*	Roman	piece with sanded underside
2174 (1)	2188	4	1	65x35x20	38	RE2		*tegula?*	Roman	fairly undiagnost frag
2174 (2)	2188	4	1	45x40x12	28	RE2		*imbrex*	Roman	fairly undiagnost frag
2174 (3)	2188	4	3	30x25x20 +25x25x20 +	37	RE1		uncertain	Roman	small frags - possibly roof tile

Context	Group	Phase	Nos.	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
2174 (4)	2188	4	1	75x60x20	108	RE2		*tegula*?	Roman	
2174 (5)	2188	4	1	60x60x25	106	RE4		*tegula*?	Roman	
2174 (6)	2188	4	1	70x80x12	67	RE3		*imbrex*	Roman	
2174 (7)	2188	4	2	110x50x13 (refit)	134	RE1		uncertain	Roman	probably roof tile
2174 (8)	2188	4	1	70x60x30+	104	RE4		*pila* tile brick?	Roman	weathered frag (undiagnost)
2174 (9)	2188	4	1	40x30x15	23	RE3		uncertain	Roman	
2174 (10)	2188	4	1	75x50x30	149	RE4		*pila* tile brick?	Roman	thin brick - weathered
2174 (11)	2188	4	3	90x80x17 + 45 + 60	259	RE2 + RE4		uncertain	Roman	roof tile - weathered
2174(12) *	2188	4	1	70x75x25	168	RE1		*tegula* fragment re-use as **pot lid**	Roman	broken piece chipped into round for re-use
2175 (1)	2188	4	1	50x35x18	42	RE1		fragment of box flue tile	Roman	with faint parallel line impressed border
2175 (2)	2188	4	1	40x40x15	27	RE4		*tegula*	Roman	thin-walled flange
2181	2176	4	1	25x20x15+	7	RE4		uncertain	Roman	v small tile frag
2182	2176	4	1	70x50x12	49	RE2		*tegula?*	Roman	from thin centre part
2189 (1)	2188	4	3	90x60x52x21 (thick) +30	285	RE5		*tegula*	Roman	minimum 1: with narrow half-round flange
2189 (2)	2188	4	1	80x80x30	238	RE2		uncertain	Roman	roof tile – v weathered
2191	2188	4	2	60x30x17 + 40x27x30 (thick)	72	RE2/ 4		*tegula*	Roman	incl thin-flange (17mm) type
2194 (1)	2193	2	1	42x30x21	36	RE6		box flue tile?	Roman	trace parallel line decoration
2194 (2)	2193	2	1	75x65x17	76	RE4		uncertain	Roman	weathered tile frag

Context	Group	Phase	Nos.	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
2197 (1) *	2196	3	3	65x60x20 + 45 + 35	136	RE4	bright red	fragments of box flue tile	Roman	faint roller linear design on sanded exterior - weathered
2197 (2)	2196	3	1	100x17x15	133	RE5	grit tempered	*imbrex*?	Roman	roof tile or ceramic jar? NB with faint cross-hatch scoring on exterior
2197 (3)	2196	3	2	90x85x25	227	RE5		*tegula?*	Roman	
2199 (1)*	2176	4	2	190x85x15 (re-fit pieces)	461	RE3		*imbrex* type flue tile?	Roman	semi-tubular tile with concentric décor and clay flute groove join at end. Sooted
2199 (2) *	2176	4	3	90x130x35x20 120x90x42x20 80x90x45x17	957	RE1 + RE2		*tegula*	Roman	x3 diff tile (frags) all with flanges + 2 finger groove (1 with cut mark
2199 (3)	2176	4	1	70x70x30	177	RE3		*pila* tile brick?	Roman	weathered frag
2199 (4)	2176	4	1	80x80x20	214	RE3		uncertain	Roman	tile
2199 (5)	2176	4	1	290x170x40	2415	RE2	patin flint g + sand	*lydium* tile brick	Roman	complete section through a broken tile (*lydium* 18" x 12" x1.5")
2202	2007	4	1	60x45x52x23 (thick)	181	RE1		*tegula*	Roman	flange fragment of tegula
2204	2007	4	2	80x55x50 (flange)x 20	198	RE1		*tegula*	Roman	thin flange piece (20mm)
2205 (1)	2007	4	1	105x90x40	446	RE4		*pila* tile brick	Roman	finger concentric decor
2205 (2)	2007	4	2	55x40x20	113	RE2		uncertain	Roman	roof tile
2206 (1) *	2007	4	7	4 re-fitting: 180x 70x50 (flange) x 20	705	RE2	burnt flint	fragments of broken *tegula*	Roman	av flange type and height (50mm) with finger groove in angle.

Context	Group	Phase	Nos.	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
				(thick) + 3 other pieces						Fresh-looking – no weathering
2213	2196	3	1	100x75x30	239	RE3		uncertain	Roman	almost certainly part of extreme worn brick
2218	2202	1	1	140x80x38	346	RE2		*pila* tile brick	Roman	weathered irreg frag – sooted on one face
2247 (1)	2246	2	2	70x60x30 + 60	155	RE2		*pila* tile brick	Roman	fairly undiagnostic
2247 (2)	2246	2	1	40x40x12	26	RE1		*imbrex*	Roman	fairly undiagnostic
2247 (3)	2246	2	1	70x35x20	66	RE4		frag box flue tile?	Roman	fairly undiagnostic
2251 (1)	2246	2	2	120x65x40	480	RE2	quartz peb, sand + grog	*pila* tile brick	Roman	poss var *besalis laterculus* weathered
2251 (2)	2246	2	1	30x25x25 (thick)	37	RE1		*tegula*?	Roman	fairly undiagnost frag
2277	2246	2	1	45x30x50x22-30 (thick)	92	RE1		*tegula*	Roman	part of flange
2290	2289	5	1	55x60x20	97	RE2		*tegula*		
2318	2073	3	3	70x30x35 + 70x65x20 + 100x70x20	320	RE1 + RE2		frags of *tegula*	Roman	frags from minimum x2 diff tiles
2325	2322	3	1	70x40x13	38	RE2		*imbrex*	Roman	weathered frag
2361 (1)	2071	2	3	20-35	17	RE1		uncertain	Roman	v small frags
2361 (2)	2071	2	1	55x25x15	18	RE3		uncertain	Roman	trace concentric decor
2363 (1)	2071	2	3	70x70x17 + 60x60x25	283	RE4 + RE1		uncertain	Roman	
2375	2026	2	1	25x25	7	RE1		frag of *tegula*	Roman	flake from flange piece
2398	2350	2	2	40+80	103	RE5		uncertain	Roman	tile

Context	Group	Phase	Nos.	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
2399	2350	2	2	45x50x40	122	RE5		*tegula*	Roman	wide flange diagonal (40mm)
2405	2007	4	1	40x25x12	13	RE3		uncertain	Roman	weathered tile frag
2412 (2)	2007	4	1	85x50x20-25 (thick)	112	RE1	voids	*tegula*	Roman	small fragment with flange: av flange type and height (50mm) with finger groove in angle. Sand on base
2417	2007	4	2	120x50x20 + 45x50x14	193	RE1 + RE2		*tegula*	Roman	min x2 tiles: one with thin-walled flange
2418	2007	4	1	130x150x18	411	RE2		*tegula?*	Roman	fairly undiagnostic flat
2419	2007	4	1	30	7	RE2		uncertain	Roman	
2420	2007	4	1	110x80x23	215	RE2		*tegula?*	Roman	fairly undiagnostic flat
2423 (1)	2007	4	1	80x70x35+	164	RE2		*pila* tile brick	Roman	undiagnostic frag
2423 (2)	2007	4	1	65x35x8	18	RE2		uncertain	Roman	flake from tile
2424 *	2007	4	2	70x105x20	207	RE1		*tegula*	Roman	centre piece with double concentric impress design
2429*	2007	4	1	70x65x45x20	164	RE2		*tegula*	Roman	fresh-looking break – square narrow flange
2435	2007	4	1	60x30x60x20-30 (thick)	117	RE1		*tegula*	Roman	av flange type and height (60mm) with finger groove in angle
2437*	2007	4	1	80x55x15	106	RE1		box flue tile	Roman	roller-impressed comb chevron design
2441	2176	4	1	60x80x50x15	126	RE2		box flue tile	Roman	corner with parallel concentric scored lines

Context	Group	Phase	Nos.	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
2443	2176	4	1	90x40x12	63	RE3		uncertain	Roman	tile
2445	2176	4	1	90x75x40x23 (thick)	224	RE1		*tegula*	Roman	frag flange join with single finger groove
2446 (2)	2176	4	1	50x45x20	54	RE2		*tegula?*	Roman	
2447 (2)	2176	4	1	30x50x47x20-27	78	RE2		*tegula*	Roman	frag of wide flange
2451 (1)	2176	4	1	55x60x15	56	RE2		uncertain	Roman	tile
2452 (1)	2176	4	1	40x75x40	123	RE2		*pila* tile brick	Roman	weathered frag
2452 (3)	2176	4	2	20-35	14	RE4		uncertain	Roman	weathered undiagnostic
2453	2176	4	1	50x30x20	27	RE2		*tegula* ?	Roman	poorly diagnostic
2459 (1)	2176	4	3	150x80x32 165x100x30+ 100x80x30	1387	RE5 + RE2 +		*pila* tile brick	Roman	v weathered fragments of thin brick
2459 (2)*	2176	4	5	140x180x60 75x90x50x22 45x45x40 90x60x20 +90	1848	RE1 + RE2 + RE3		*tegula*	Roman	large piece with one concentr décor, flange thumbprint +var frags
2459 (3)*	2176	4	10	170x130x22 130x90x15 100-80	1973	RE1+ RE2+ RE5		*imbrex* + other curved tile	Roman	flattish-topped curved tile (1468g) and tubular imbrex (505g)
2459 (4)	2176	4	6	140x100x13 140x70x13 70x80x15 + 65-100	741	RE2 + RE3 + RE4		possible flue tile pieces	Roman	undecorated – uncertain if box flue. Some sooting
2459 (5)	2176	4	2	100x60x11	122	RE3		flat tile	Roman	some faint concentric scratches
2460 (1)	2176	4	1	75x40x45	176	RE4		*pila* tile brick?	Roman	undiagnostic frag
2460 (2)	2176	4	1	60x65x10	65	RE3		*imbrex*?	Roman	undiagnostic
2465 (1)	2188	4	1	80x50x256	103	RE2		floor tile?	Roman	possibly roof tile used as floor tile?

Context	Group	Phase	Nos.	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
2465 (2)	2188	4	2	35	22	RE1		possibly *tegula*?	Roman	undiagnostic frags
2465 (3)	2188	4	1	55x45x13	41	RE1		*imbrex*	Roman	small frag
2467 (1)	2188	4	2	100x35x40 (flange)x20 80x40x40x21	230	RE1 + RE4		*tegula*	Roman	half-round and square type flange
2467 (2)	2188	4	1	50	24	RE1		*imbrex*	Roman	weathered frag
2468	2188	4	1	40x45x12	36	RE1		*imbrex*	Roman	
2469	2188	4	2	60x70x25+	100	RE4		uncertain	Roman	tile
2470	2188	4	2	15-20	3	RE1		uncertain	Roman	tile flakes
2472 (1)	2188	4	2	50x50x20	87	RE2		*tegula*	Roman	frag with double finger groove
2472 (2)	2188	4	1	35x30x10	22	RE5		frag box flue tile	Roman	fairly undiagnostic – light grey wash
2475	2188	4	2	55x30x22 +35	73	RE1 + RE4		*tegula*?	Roman	poorly diagnostic frags
2476	2188	4	1	70x50x15	63	RE2		uncertain	Roman	tile
2478	2188	4	1	55x35x17	46	RE5		uncertain	Roman	tile
2479	2188	4	1	60x50x17	60	RE2		uncertain	Roman	undiagnostic tile
2480 (1)	2188	4	3	90x50x35 + 90x80x37(refit)	457	RE4+ RE2		*pila* tile brick	Roman	thin *laterculus* bricks?
2480 (2)	2188	4	1	60	28	RE2		uncertain	Roman	tile flake
2480 (3)	2188	4	4	90x45x35 +55x60x40 + 50x60x35	487	RE4		*pila* tile brick	Roman	minimum 2 tiles (weathered frag)
2481	2188	4	2	60x50x20 (thick)	89	RE1		*tegula*	Roman	narrow round/square flange profile
2502	2344	1	1	65x50x17	96	RE5		uncertain	Roman	roof tile

Context	Group	Phase	Nos.	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
2505	2246	2	1	130x125x35	618	RE4		*pila* type *laterculus* tile brick	Roman	with faint narrow scored line border
2507	2246	2	1	60	27	RE1		uncertain	Roman	weathered tile frag
2557	2556	2	1	55x50x25	51	RE1	red Fe-rich grog	*tegula*	Roman	end of tile flange bit– smooth finish
2596 *	2385	3	1	130x80x52	627	RE2		*pila* type *pedalis* or *sesquipedalis*	Roman	NB line scored across top
2616	2615	3	2	65x50x15	62	RE4		uncertain tile	Roman	has small crimped lip
2618 (1)*	2613	1	1	110x190x65 (thick)	1271	RE4	sandy	fragment of *bipedalis* brick	Roman	weathered (original 550-600mm square?)
2618 (2)	2613	1	4	150x140x37 150x110x40 90x110x40	2304	RE4	sandy w patinated flint pebble	*pila* type tile-brick	Roman	weathered – all of same type
2650	2071	2	2	40x35x10+	25	RE4		*pila* tile-brick?	Roman	fairly undiagnostic
2659	2037	2	1	90x55x10+	46	RE1		*tegula*?	Roman	flake – poorly diagnost
2662	2037	2	1	50x35x20	29	RE1		*tegula*?	Roman	undiagnostic
2722 (1)	2073	3	2	80x40x40 + 90x60x40	384	RE4		*pila* tile-brick	Roman	one piece with scored line along edge (min 2)
2722 (2)	2073	3	2	100x55x20	225	RE3 + RE2		*tegula?*	Roman	one piece with concentric déco (min 2)
2729 (1)	2560	5	1	50x75x30	110	RE5		box flue tile?	Roman	'squirly' parallel line décor to exterior
2729 (2)	2560	5	1	45x40x15	37	RE4		*imbrex*	Roman	weathered frag
2729 (3)	2560	5	2	110x80x17	126	RE2		uncertain	Roman	roof tile
2812 (1) *	2196	3	3	95x70x20	183	RE8	soft silty red-brown with mica	box flue tile	Roman	wavy comb-scored (roller impress) sooted

Context	Group	Phase	Nos.	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
2812 (2)	2196	3	1	52x40x30	60	RE4		uncertain	Roman	
2816	2196	3	1	80x80x15	162	RE2		*imbrex*	Roman	
2822	2615	3	1	10x65x35	283	RE5	sandy	*pila* type tile-brick	Roman	weathered frag
2826	2825	3	2	50x55x15 + 13	78	RE1/ 5		uncertain	Roman	weathered tile
2830	2686	2	1	55x45x13	38	RE4		uncertain	Roman	roof tile : 'finger groove' on edge as join to fit
2837 (1)	2686	2	1	55x25x15	24	RE2		*imbrex*?	Roman	non-diagnostic frag
2837 (2)	2686	2	1	55x55x17	80	RE2		box flue tile?	Roman	parallel comb décor ext
2913	2613	1	1	70x60x20	99	RE2		*tegula*?	Roman	possible only
2972	2168	1	1	45x40x45+	90	RE1		*pila* type tile-brick	Roman	
3041 (1)	2979	1	1	80x85x20	125	RE2		*tegula*?	Roman	sand-gritted under
3041 (2)	2979	1	1	30 thick	13	RE4		*pila* type tile-brick	Roman	rim edge only – has diagonal dec scoring
3049	2395	5	1	60x60x20	53	RE5		uncertain	roman	roof tile frag
3053	2686	2	1	50x40x40 (thick)	80	RE4		*pila* type tile-brick	Roman	poss var *besalis laterculus* (1.5" thick)
3080 (1)	3093	3	1	55x40x22 (thick)	80	RE4		*tegula*	Roman	possibly with a 'cut-away' on the flange
3080 (2)	3093	3	4	25-45	60	RE2/ 3		uncertain	Roman	weathered pieces and flake – possibly of tile waster or FC
3080 (3)	3093	3	1	110x85x20	198	RE3		*tegula*	Roman	concentric line on underside and groove along flange edge top
3080 (4)	3093	3	1	105x50x17	115	RE3		*imbrex*	Roman	

Context	Group	Phase	Nos.	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
3080 (5)	3093	3	1	100x40x15	68	RE1	VT	uncertain	Roman	tile
3084 (1)	3093	3	1	40x30x15	23	RE1		frag box flue tile	Roman	trace of mortar
3084 (2)	3093	3	1	65x30x20	37	RE2		frag *tegula*	Roman	var thin-walled flange
3084 (4)	3093	3	5	50x60x45x23 (thick) + 40-45	250	RE1 + RE3		*tegula*	Roman	var frags of flange (min 3 diff tiles)
3084 (5)	3093	3	1	100x110x35	374	RE1		*pila* type tile-brick	Roman	undiagnostic thin tile
3085 (1)	3093	3	2	65x60x35	128	RE3	brick-red with small red clay incl	*pila* type tile-brick	Roman	weathered piece (with sand parting on lower surface)
3085 (2)	3093	3	1	105x105x16	209	RE2		fragment of *imbrex*	Roman	sand parting surface underside
3085 (3)	3093	3	1	75x70x15	97	RE3		poss frag of box-flue tile?	Roman	plain tile frag – relative undiagnostic
3086 (1)	3093	3	4	70x60x40	137	RE3		*pila* type tile-brick	Roman	fairly undiagnostic
3086 (2)	3093	3	1	60x65x20	95	RE3		frag box-flue tile?	Roman	fairly undiagnostic
3086 (3)	3093	3	1	40x35	42	RE1		frag *tegula*	Roman	fairly undiagnostic
3086 (4)	3093	3	1	70x45x25 + 65x60x40	397			uncertain		possibly brick – very weathered pieces
3086 (5)	3093	3	1	60x40x20	49	RE1		uncertain	Roman	sand grit underside NB poss animal print
3086 (6)	3093	3	1	190x105x40	1181	RE4		*pila* type tile-brick	Roman	small *laterculus* size (7.5"x7.5"x1.5") good section of broken one
3086 (7)*	3093	3	1	260x235x55 (flange) x25 (thick	2120	RE1		*tegula*	Roman	good example (c. 60%) with pre-firing cut-away of semi-circular flange

Context	Group	Phase	Nos.	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
3087 (1)	3093	3	1	60x60x41	300	RE2?		*pila* type tile-brick	Roman	var *laterculus* – highly fired/ dense tile
3087 (2)	3093	3	2	90x55x22 + 65	185	RE1 + RE7	RE7 grey finely gritted with fossil	*tegula* ?	Roman	poorly diagnostic piece
3087 (3)	3093	3	2	60x55x25 + 60x50x20	198	RE2		*tegula*?	Roman	one fragment re-burnt (cracked). Min no. 1
3090 (1)	3093	3	1	100x50x20	140	RE5		uncertain	Roman	tile
3090 (2)	3093	3	1	40x40x60 (flange)x30	126	RE1		*tegula*	Roman	round/square flange
3096 (1)	3093	3	2	50 + 35	30	RE1		uncertain	Roman	prob tegula or imbrex (small flakes)
3096 (2)	3093	3	1	70x70x20	150	RE5		*pila* type tile-brick	Roman	thin tile frag (weatherd
3096 (3)	3093	3	1	90x75x20	131	RE4		frag box-flue tile?	Roman	undiag no décor. Soot
3096 (4)	3093	3	2	50x40x23 + 45x40x17	96	RE4		*tegula?*	Roman	fairly undiagnostic frag
3096 (5)	3093	3	7	25-68	161	RE4		uncertain	Roman	flakes of tile brick
3098 (1)	3093	3	1	50x55x35	93	RE2		*pila* type tile-brick	Roman	fairly undiagnostic
3098 (2)	3093	3	2	40x40x17 + 40x30x16	55	RE6	coarse clay fabric with ground grog	box-flue tile	Roman	fairly undiagnostic fragments
3098 (3)	3093	3	1	60x40x15	49	RE1		*imbrex*	Roman	weathered
3098 (4)	3093	3	2	65x60x20 + 55	78	RE1		*tegula*	Roman	fairly undiagnostic
3100	2825	3	2	65x40x30 + 35	87	RE3 +RE4		*tegula*	Roman	highly fired piece of flange edge
3102 (1)	2825	3	1	40x50x23	61	RE2	flint and grog	*tegula*	Roman	small broken fragment: with

Context	Group	Phase	Nos.	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
										av flange type/ height
3102 (2)	2825	3	1	25x30x20	19	RE1		*tessara?*	Roman	roughly squared tile piece cut but not used NB cut mark visible
3153	2291	3	1	145x70x60 (flange)x24	395	RE2		*tegula*	Roman	thick (40mm) round/square flange
3164	3093	3	1	75x75x32	205	RE1		*pila* type tile-brick	Roman	NB scored line along rim
3165 (1)	3093	3	1	55x45x20	57	RE1		*tegula*	Roman	flange frag only NB has slight stepped flange. Also has been sawn in half (origin?)
3165 (2)	3093	3	1	60x60x18	76	RE4		*tegula*	Roman	frag from centre piece with concentric design
3168 (1)	2168	1	1	55x40x30	86	RE1		*tegula* frag	Roman	example of a stepped flange shape
3168 (2)	2168	1	2	130x120x13 (x2 refits)	197	RE2		*imbrex* frag	Roman	sand-gritted underside
3204 *	2196	3	1	90x80x15	133	RE3		frag interior box flue tile?	Roman	has three finger grooves along missing angle – sooted surface
3209 (2)	2350	2	2	110x80x22 (refit)	261	RE5		*tegula*	Roman	with double concentric groove decor
3209 (3)	2350	2	2	60x40x35 (thick)	169	RE4		*pila* type brick?	Roman	weathered pieces
3269	3093	3	1	195x2100x22	1373	RE5		*tegula*	Roman	flange broken-off but pre-firing cut-away pres

Table 31: Ceramic building material catalogue

B.10 Glass by Carole Fletcher

Introduction and Methodology

B.10.1 A small to moderate assemblage of mainly blue/green Roman glass was recovered from ditches, pits and other features, although the bulk of the Roman glass assemblage was recovered from the various layers that make up Group 2007 in Phase 4. A single piece of post-medieval glass was recovered as an intrusive element in ditch **2002**. The glass was scanned and recorded by form, colour, count and weight, dated where possible, and recorded in Table 32. *Romano-British Glass Vessels: A Handbook* (Price and Cottam 1998) was used as a general guide for the Roman glass for this report. *Antique Glass Bottles Their History and Evolution (1500-1850)* (Van den Bossche 2001) and *The Parks Canada Glass Glossary* (Jones and Sullivan et al 1989) were used for the post-medieval material.

Factual Data

B.10.2 Phase 1: Ditch **2002** produced the only confirmed post-Roman glass from the site - a large base shard from a utility bottle that most probably originally contained wine, and dates from the late 17th-late 18th century.

B.10.3 Pits **2037** (Group **2515**), **2912** (Group **2613**) and **2971** (Group **2079**) each produced a single shard of glass, none of which were identified to a specific vessel form. A further two shards of glass were recovered from SFB **3167** (**2168**), one of which may be from a bottle or jug; the exact form of the vessel requires further research.

B.10.4 Phase 2: Five features produced fragments of glass, the majority of which is vessel glass recovered from pits **2121** (Group **2100**) **2715** (Group **2507**) and pit **3206** (Group **2350**). None of the fragments was identified to a specific vessel type.

B.10.5 Two further glass shards were recovered from SFB **2504** (**2246**), which produced a fragment of ?window glass and a curved shard, possibly from the shoulder of an as yet unidentified vessel.

B.10.6 Phase 3: Only two shards of glass were recovered from this phase, both from SFB **3258** (**3093**), of which one shard, SF615, may have been burnt. The glass has several rounded edges and a possible trimmed edge, its exact form is uncertain, although it could be a distorted spout from a jug. The second fragment of glass, (SF 616), is part of the neck, shoulder and near-complete looped, dolphin-shaped handle from a cylindrical bottle with two looped handles (See Price and Cottam page 206-207 fig 94).

B.10.7 Phase 4: This phase produced the bulk of the Roman glass assemblage, 38 shards of mostly vessel glass, of which almost all were recovered from the various layers (2048, 2163, 2164, 2174, 2204 and 2205) that form group 2007. Of the glass recovered, only six shards or groups of shards could be identified at this stage to a vessel form. Group 2007 produced 20 shards from a highly fragmented, clear, near-colourless glass bowl, a shard from the tubular rim of a bowl, two base shards from a prismatic bottle and two handle fragments. One of the latter is clearly from a ribbon handle base, retaining

the narrow close-set vertical reeding that are pulled into points where they join the shoulder of the vessel.

B.10.8 The final fragment from this phase was recovered from layer 2048 (Group 2188) and is a thick curved blue/green body shard, possibly from a prismatic bottle.

B.10.9 Phase 5: Produced only a single undiagnostic shard of thick blue/green glass.

Discussion

B.10.10 The fragment of glass recovered from ditch **2002** in Phase 1 is obviously intrusive, suggesting some degree of contamination of the feature, and is of little significance, beyond indicating the deposition of low levels of late 17th-late 18th century rubbish.

B.10.11 The remainder of the assemblage is clearly Roman, with bowls, jugs and bottles all represented, although much of the vessel glass has not been identified to a particular vessel type at this stage. There are a few shards tentatively identified as window glass, alongside a number of shards where their identification of type was uncertain and there may be more window glass among these shards.

B.10.12 Very few of the shards can be dated at this point, apart from SF616, the partial neck, shoulder and near-complete, looped, dolphin-shaped handle from a cylindrical bottle. Price and Cottam suggest they were in use in the later third to the third quarter of the 4th century (Price and Cottam, p. 206), which does not entirely agree with the excavator's provisional phasing, perhaps indicating that the shard is intrusive.

B.10.13 The variety of forms present indicates access to glass tableware, much, if not all, of which was very probably manufactured in Britain. Roman vessel glass is not uncommon, and the blue/green and indeterminate fragments present are not easily dated.

B.10.14 The dating of the glass may be narrowed by further study and identification of forms. The assemblage is thoroughly fragmented, and the bulk of the assemblage, having been recovered from the midden, represents general rubbish deposition from roadside settlement and the occupation of the site during the Roman period. It has undergone reworking over a period of time, rather than deliberate deposition at any one particular point, during the occupation of the site.

Statement of potential

B.10.15 The Roman assemblage has some potential to aid national, regional, or local research objectives, and indicates a level of domestic occupation and the ability of the occupants of the settlement to access glass vessels, presumably by trade. There is also the possibility of the presence of some vessels associated with cremation or burial. The late 17th-late 18th century glass assemblage has no potential to aid local, regional, and national research priorities.

Further Work

- The glass needs to be fully examined, forms identified, and the catalogue amended.

- Parallels should be found for any significant pieces and comparison drawn to any relevant assemblages.
- Produce a written report on the assemblage to the appropriate level.
- Identify material for illustration or photography.

Retention, dispersal and display

B.10.16 The Roman glass should be retained for further analysis; the post-medieval bottle base may be deselected prior to archive deposition.

Catalogue

Phase	Context number	Cut No	Group	Small Find No.	Form	Description	Shard Count	Weight (kg)	Glass Date
1	2003	**2002**	2002		Vessel: Utility bottle	Incomplete base from a mid olive green ('natural black') utility bottle, probably for wine, the base diameter is approximately 140mm, with a rounded resting point and a broad domed kick, slightly irregular at the pontil mark, which is obscured by heavy patination, much of which is iridized and flaking	1	0.362	Late 17th-late 18th century
	2040	**2037**	2515		Vessel	Triangular fragment of pale blue/green glass, slightly curved with bubbles and faults	1	0.002	Roman
	2065	**2971**	2079		Uncertain	Irregular, uneven fragment of blue/green glass. The surface of the glass is weathered and clouded, feeling somewhat matt. The other exterior surface feels very dull and looks matt, as if in contact with a mould surface	1	0.009	Roman
	2913	**2912**	2613		Uncertain	Small irregular fragment of clear, strongly coloured blue-green glass, numerous small bubbles and faults within the glass. One surface is somewhat weathered	1	0.001	Roman
	3017	**3167**	2168		Vessel: Bottle	Irregular fragment of clear blue-green glass. This fragment is made up of two pieces of glass, a slightly curved fragment, to which has been applied another piece of glass, which may be part of the handle	1	0.004	Roman
	3017	**3167**	2168		Uncertain	Irregular fragment of blue/green flat glass. The probable outer surface of the shard is relatively matt, the other is smooth, suggesting the glass is mould-blown. There are numerous tiny bubbles within the glass, and some faults	1	0.004	Roman
2	2123	**2121**	2100		Vessel	Three shards of pale blue/green glass, possibly from two different vessels. One sub-rectangular shard curved and with a slight upturn at one end and downturned at the other suggesting the shard is from the shoulder of a vessel. The surface is weathered, and the glass has a number of bubbles and faults. Two irregular thin very pale blue/green	3	0.013	Roman

Phase	Context number	Cut No	Group	Small Find No.	Form	Description	Shard Count	Weight (kg)	Glass Date
						shards, both curved, both have weathered surfaces and small faults and bubbles			
	2506	**2504**	2246	528	Vessel	Sub-triangular fragment of glass, pale blue/green cast, slightly curved and appears to be possibly from the shoulder of a vessel. External surfaces matt and weathered, and there are many small bubbles and faults within the glass	1	0.003	Roman
	2506	**2504**	2246	528	?Window	Sub-triangular fragment of pale blue/green glass, relatively flat, relatively matt/weathered on both sides and with a short section of rounded edge	1	0.003	Roman
	2716	**2715**	2507		Vessel	Near-triangular fragment of clear glass with a pale blue-green cast, broken just beyond the edge of a corner, either on the shoulder or the side wall. Probably a prismatic vessel. Numerous bubbles, small and medium, and some faults within the glass	1	0.003	Roman
	3209	**3206**	2350	646	Vessel	Weighing less than a gram, this small irregular shard of clear glass with a slight blue-green cast is un-weathered, with some small bubbles within the glass itself	1	0.001	Uncertain
	3209	**3206**	2350	646	Uncertain	Triangular shard of clear glass with a strong blue/green colour one surface is flat. The other slightly domed, so it is uncertain if it is from the base of a vessel or is in fact window glass. The surfaces are in good, if slightly weathered, condition, with the small number of bubbles and faults	1	0.009	Roman
3	3084	**3258**	3093	616	Vessel: Cylindrical bottle with two handles	Fragment from a cylindrical bottle with two looped handles. The shard consists of the neck, shoulder and near complete looped, dolphin-shaped handle, which was applied to shoulder and neck. The shard is clear, pale glass with a greenish cast with small bubbles and faults. Price and Cottam indicate this type of bottle was common in settlements and some come from burials and that their date range is uncertain. They were in use in the later 3rd to the third quarter of the 4th century (Price and Cottam, page 206)	1	0.006	?Later 3rd century to the third quarter of the 4th century
	3084	**3258**	3093	615	Uncertain	Irregular fragment of clear glass with a greenish cast. The glass is curved in several directions and there two fire-rounded edges and possibly a third somewhat trimmed, yet rounded edge. The glass feels matt on all surfaces, as if it has been burnt and possibly this strange shape is the result of distortion by fire	1	0.012	Uncertain
4	2048	**0**	2188		Vessel: Bottle or Jar	Triangular fragment of thick blue/green glass. The curved shard has a few small bubbles and one	1	0.008	Roman

Phase	Context number	Cut No	Group	Small Find No.	Form	Description	Shard Count	Weight (kg)	Glass Date
						larger bubble within the glass and slight weathering to the surface. There are two curved parallel lines on the surface close to one edge, but it is unclear if this is decoration or a fault in the glass			
	2163	**0**	2007		Uncertain	Irregular, relatively flat fragment the outer surface being matt and somewhat scratched the glass itself has relatively common fine small bubbles. It is uncertain if this is the base of a vessel or a piece of window glass	1	0.002	Roman
	2163	**0**	2007		Vessel	Two shards of curved pale bluish glass. Possibly from different vessels and irregular in shape. Both are reasonably good condition, with slight clouding to the outer surface and a few small bubbles within the glass	2	0.001	Roman
	2163	**0**	2007		Vessel	Single triangular shard of thin, near colourless glass. One smooth surface, the other slightly matt. Some weathering, some fine bubbles within the glass, slight upturn on one edge and its curvature indicates it is from a vessel	1	0.001	Roman
	2163	**0**	2007		Vessel: Bowl	Rim shards and possible body shards from a highly fragmented vessel in colourless glass. The surviving pieces of rim are well formed simple and rounded, the glass itself is full of fractures and is in poor condition with regards to it breaking further. Whatever the exact vessel form, this was originally a very fine vessel, and the diameter of the rim appears to be possibly 140mm, however, the fragments are so fragile is to be uncertain. The glass appears fractured like crystal or as if exposed to heat, yet it retains, on the whole, its clarity. The same vessel appears in context 2164. The shards may be from a bowl with an outturned, fire-rounded rim, which is found in colourless glass. If it is this form, Price and Cottam indicate dating is uncertain, but suggest it was in use in the late second century	9	0.012	Roman
	2164	**0**	2007		Vessel: Bottle/Jug	Two shards of glass, possibly from the same vessel, an irregular curved shard, probably from the shoulder of the vessel and a fragment of handle with possible traces of applied ridges. The glass is slightly weathered. There are a number of bubbles. The handle shard shows evidence of folding of the glass and the colour is blue/green	2	0.005	Roman
	2164	**0**	2007		Vessel: Bowl	? Rim shard and body shards from a highly fragmented vessel in clear colourless glass. The surviving piece of rim is well formed, simple and	11	0.011	Roman

Phase	Context number	Cut No	Group	Small Find No.	Form	Description	Shard Count	Weight (kg)	Glass Date
						rounded, the glass itself is full of fractures and is in poor condition with regards to it breaking further. Whatever exact vessel form, this was originally very fine. The glass appears fractured like crystal, or as if exposed to heat, yet it retains some of its clarity, sometimes appearing slightly white; the same vessel appears in context 2163			
	2164	**0**	2007		Vessel	Small irregular fragment of clear glass with a slight greenish cast one surface is weathered, the other somewhat smoother. Appears slightly cloudy and has small faults within the glass	1	0.001	Roman
	2164	**0**	2007		Vessel Prismatic bottle	Base angle from a square or rectangular bottle, with a rounded base angle and remains of a concentric circle moulded into the base. Obviously mould blown, the outer surface is somewhat weathered, scratched in part from contact with the mould and from usage. The glass itself has small and medium-sized bubbles and some faults and is blue/green	1	0.009	Roman
	2164	**0**	2007		Vessel	Irregular shard of clear, slightly blue/green glass with some small bubbles throughout, bent as if on a corner, shoulder or base of the vessel	1	0.002	Roman
	2164	**0**	2007		Vessel Bowl	Irregular shard from the tubular rim of a ?bowl, diameter approximately 150mm. The rim is well formed, the glass has a pale bluish cast and there are few faults within the glass. Possibly from a deep tubular-rimmed bowl or a convex jar with colour rim, although the double fold does not quite match this form	1	0.006	Roman
	2164	**0**	2007		Vessel	Sub-rectangular gently curved shard in clear mostly colourless glass, thin-walled, various small bubbles and faults	1	0.001	Roman
	2174	**0**	2188		Vessel: Bottle	Irregular fragment of blue/green glass from the base of a ribbon handle where it was attached to the shoulder of the bottle. The exact shape of the bottle is uncertain, however, it bears the narrow close set vertical ribs or reeding that have been pulled into points where they join the body. The glass has some small faults and moderate numbers of small bubbles	1	0.010	Roman
	2204	**0**	2007		Uncertain	Irregular fragment of near-colourless glass, the outer surface is somewhat cloudy and feels matt, giving the glass a slightly translucent appearance rather than transparent. There are few faults, and its form and date are uncertain	1	0.002	Uncertain
	2205	**0**	2007		Vessel	Irregular shard of curved, almost twisted, glass, rough, weathered	1	0.001	Roman

Phase	Context number	Cut No	Group	Small Find No.	Form	Description	Shard Count	Weight (kg)	Glass Date
						outer surface, smooth inner, various small striations and bubbles and general faults in the glass, pale blue/green			
	2205	**0**	2007		Vessel	Irregular shard of clear pale blue/green glass. Externally weathered and feels matt, medium and small bubbles in the glass and some striations	1	0.001	Roman
	2205	**0**	2007		Vessel Prismatic bottle	Base angle from a prismatic bottle, with traces of a concentric circle moulded into the base. The glass is greenish, the outer surface matt and weathered and small bubbles within the glass	1	0.010	Roman
	2414	**0**	2007		Vessel	Irregular shard of thin, clear glass with a bluish cast. Some striations on the external surface and a small number of bubbles and faults within the glass	1	0.002	?Roman
5	2290	**2289**	2289		Uncertain	Irregular shard of relatively thick glass, blue/green, slightly weathered surfaces, one very much more weathered and matt. Some small to medium bubbles within the glass; uncertain if this is vessel or window glass	1	0.006	Roman

Table 32: Glass catalogue

B.11 Worked bone by Ian Riddler

Introduction

B.11.1 Due to the small size of this assemblage, the full archive report is included in this assessment.

Bone Pins

B.11.2 The six bone pins can be identified to type, following the sequences proposed by Crummy and Greep (Crummy 1983, 19-25; Greep 1995, 1113-21). The earliest pin is likely to be a complete example with a lightly pointed head and evenly tapered shaft (SF 126 (from layer 2007, Phase 4)) belonging to Crummy type 1 and Greep type A2.1. It is a noticeably long pin, extending to 130mm and lying beyond the range of sizes for this pin type from Cambridge, Colchester and Stonea (Alexander and Pullinger 1999, 87; Crummy 1983, 20; Greep 1996, 526). The type is thought to occur in contexts of the mid 1st century to the 3rd century, although examples from Amiens were entirely confined to 2nd-century contexts and the assemblage from Stonea mostly came from deposits of the 2nd century or the early 3rd century (Thuet 2007, 3; Greep 1996, 526). Two related pins (SFs 384 (from layer 2007, Phase 4) and 491 (from Ditch **2081**, Phase 2)) also have conical heads, but they are narrower in form and include a single collar below the apex. They belong to Crummy type 2 and Greep type A2.2. Crummy (1983, 21) pointed to the weakness of the shafts of these pins and that is well-illustrated here, with the lower parts of both pins now missing. Thirteen of the fifteen pins of this type from Stonea had also fractured (Greep 1996, 526 and 528). The same broad early Roman dating has been given to this pin type, with Crummy suggesting that they can be dated to *c.* 50-200 (Crummy 1983, 21). A segment of the shaft of a bone pin or needle (SF 325 (from layer 2007, Phase 4)) tapers evenly along its length and could conceivably have come from a pin of this type.

B.11.3 Two further pins are of Late Roman date. Both belong to common types and are distinguished by the presence of swollen shafts, either lightly widened or overtly bulbous. One pin (SF 350 (from layer 2188, Phase 4)) is almost complete and includes a hemispherical head. It can be placed in Crummy type 3 and Greep type B1.1. These are shorter pins than the Early Roman forms, with globular heads that include numerous variant forms, as here where the head shape is hemispherical because of its flat base. The type is rarely seen before the 3rd century and became increasingly common thereafter (Crummy 1983, 22; Greep 1995, 1117; Thuet 2007, 3). It is one of the most common pin types of the period. Broadly the same dating can be applied to a pin (SF 220 (from Ditch **2071**, Phase 2) with a polyhedral head of Crummy type 4 and Greep type B.4, although these pins are unlikely to have been made before *c*. AD 250 at the earliest. The faceted heads of these pins were difficult to manufacture accurately and many of them have irregular faces (Crummy 1983, 23). This pin, however, has been cut with some skill, utilising solid bone throughout, with no cortile tissue present, and its faces are regular and well-executed.

Pack Needle

B.11.4 A complete example of a pack needle (SF 296 (from Pit Group **2100**, Phase 2)) has been cut from one of the lower tines of a red deer antler, with part of the natural curve of the antler flattened around the mid-point on the outer curve, and with two lateral perforations at the broad end, within an area that has been hollowed to a depth of 75mm. Pack needles are curved antler tine ends, often but not invariably equipped with distinctive notches on the inner or outer curves, as well as one or several perforations nearby that allow cord to pass through the broad end of the implement and to be secured there. The curved and notched form has a long ancestry stretching back to the late Bronze Age and a fragmentary Iron Age example came from Wandlebury hillfort (Grimm 2003, 218-9; Hartley 1957, fig 10.6; Riddler 2018, fig 4). Roman examples, also fragmentary, are known locally from Cambridge and Love's Farm (Alexander and Pullinger 1999, pl XIX.167; Crummy 2018, 195 and fig 6.53.16). In this particular case, the implement does not have a notched surface and a part of the outer curve of the tine has been flattened and smoothed with a knife. One or more cords would have been passed through the perforations at the broad, hollowed end and carried behind the pack needle across packaging in order to secure it firmly for transportation (Mikler 1997, 55-6; Riddler 2018). The object has been polished but manufacturing marks are still visible and it does not appear to have been used for any length of time. It represents a variant form of the pack needle series because of the presence of lateral perforations and the lack of a notched area. This variant can be seen in Late Iron Age contexts and is the most common form to be seen in the Anglo-Saxon period. It is rare in Roman contexts although an implement from Augst has been hollowed in the same way and includes a single perforation, set on the inner curve of the antler, and there are several examples from a Roman assemblage from Vertault, including one with two lateral perforations, much as here (Deschler-Erb 1998, taf 57.4543; Rodet-Belarbi and Béal 2003, 88-90 and fig 26).

Recommendations for further work

B.11.5 This statement acts as a full record for the archive and no further work is required beyond summarising the information for publication. All of these items are recommended for illustration.

APPENDIX C ENVIRONMENTAL ASSESSMENTS

C.1 Charred plant remains by Rachel Fosberry

Introduction

C.1.1 A total of sixty bulk environmental samples were taken from the fills of features within the excavated area in accordance with the sampling strategy for this site which aimed to maximise the recovery of ecofacts and small artefacts from all feature types, phases and areas.

C.1.2 Samples taken during the evaluation by Cotswold Archaeology (Hardcastle 2019) indicated that there was potential for the recovery of charred plant remains with moderate amounts of dumped hearth waste recovered. The longevity of the excavation allowed selected samples to be assessed and feedback to be given with the result that the sampling strategy could be reviewed and adapted and additional material could be obtained if required.

C.1.3 The purpose of this assessment is to determine whether environmental remains are present, their mode of preservation and whether they are of interpretable value to address the research aims of the project with regard to domestic, agricultural and industrial activities, diet, economy and rubbish disposal.

Methodology

C.1.4 The samples were processed by tank flotation using modified Sīraf-type equipment for the recovery of preserved plant remains, dating evidence and any other artefactual evidence that might be present. The floating component (flot) of the samples was collected in a 0.3mm nylon mesh and the residue was washed through 10mm, 5mm, 2mm and a 0.5mm sieve.

C.1.5 A magnet was dragged through each residue fraction for the recovery of magnetic residues prior to sorting for artefacts. Any artefacts present were noted and reintegrated with the hand-excavated finds.

C.1.6 The dried flots were subsequently sorted using a binocular microscope at magnifications up to x 60 and an abbreviated list of the recorded remains are presented in Tables 1 to 4.

C.1.7 Identification of plant remains is with reference to the Digital Seed Atlas of the Netherlands (Cappers *et al.* 2006) and the authors' own reference collection. Nomenclature is according to Zohary and Hopf (2000) for cereals and Stace (2010) for other plants. Carbonised seeds and grains, by the process of burning and burial, become blackened and often distort and fragment leading to difficulty in identification. Plant remains have been identified to species where possible. The identification of cereals has been based on the characteristic morphology of the grains and chaff as described by Jacomet (2006).

Quantification

C.1.8 For the purpose of this assessment, items such as seeds and cereal grains have been scanned and recorded qualitatively according to the following categories:

= 1-5, ## = 6-25, ### = 26-100, #### = 100+ specimens

C.1.9 Items that cannot be easily quantified such as charcoal and molluscs have been scored for abundance

+ = rare, ++ = moderate, +++ = abundant

B=burnt, f = fragment

Results

C.1.10 Preservation of plant remains is predominantly by carbonisation (charring) which only occurs under certain conditions when plant material is incompletely burnt and reduced to pure carbon. It is important to note that any surviving charred remains will only represent a small proportion of the original material being burnt. There is clear bias towards the large sunken-featured buildings (SFBs) located along the northern boundary of the site, which were the predominant features encountered during excavation. The most productive samples came from obvious charcoal-rich deposits within these features and also from a cluster of pits in the south of the main area of excavation.

C.1.11 The preservation of the carbonised remains is generally very good although there is obvious damage to the many of the cereal grains in the form of what appears to be bore holes. This may have been caused by either insect or mould attack and there is further evidence that the grain may have spoiled through germination. The damage to the grain would have probably been visible and could be a reason for its destruction. Wheat (*Triticum* sp.) is the most common cereal variety present. Hulled wheat varieties, spelt/emmer (*T. spelta/dicoccum*) have been identified through the grain morphology and the characteristic and diagnostic chaff elements. Free-threshing wheat (*T. aestivum/turgidum*) grains have a different shape to hulled wheat grains, generally more rounded, and appear to be present in many of the assemblages. The identification can only be tentative without the more diagnostic chaff elements.

Phase 1: Mid-1st to 2nd century AD

C.1.12 Abundant assemblages of charred cereal and weed seeds were recovered from SFB **2168**. Samples taken from fills 3055, 3056, 3059 and 3246 from quadrant **3247** all produced similar assemblages of frequent/abundant hulled and free-threshing wheat (with some evidence of germination) and moderate quantities of chaff and an abundance of weed seeds. The weed species include weeds that are likely to have been growing amongst (and harvested with) cereal crops such as bromes (*Bromus* sp.), corn gromwell (*Lithospermum arvense)* and corncockle (*Agrostemma githago*), scentless mayweed (*Tripleurospermum inodorum*), black bindweed (*Fallopia convolvulus*) and docks (*Rumex* sp.). There are also numerous seeds of plants that represent hay pasture such as self-heal (*Prunella vulgaris),* rushes (*Juncus* spp.), ribwort plantain (*Plantago lanceolata*) and several different grass (Poaceae) species.

C.1.13 Samples from fills 2319, 3171 and 3210 from opposing quadrant **3167** show more variation in content suggesting spatial variation in the burnt backfills of this feature.

Sample	Context Number	Cut	Feature Type	Function	Group	Volume	Flot Volume	Cereals	Chaff	Legumes	Charred seeds	Wetland seeds	molluscs	Charcoal	Comments	Potential
122	2292	2291	ditch	boundary/enclosure	2069	8	10	##	0	#	#	0	0	<1	poor preservation	
105	2066	2971	pit		2079	17	60	##	#	#	0	0	0	5	Poor preservation. occasional spelt grains	
110	2011	2109	pit	deliberate backfill	2109	16	50	#	#	#	#	0	0	<1	poor preservation	
124	2319	3167	MIDDEN DEPOSIT		2168	6	5	#	0	0	0	0	+	0	poor preservation	
156	3171	3167	fill of SFB	disuse	2168	16	5	#	0	0	#	#	0	<1	FT and hulled wheat	
157	3210	3167	fill of pit/SFB?	disuse	2168	17	5	##	0	0	##	#	0	<1	FT and hulled wheat	
148	2973	3247	pit		2168	17	10	###	#	0	##	#	0	<1	FT and hulled wheat, frequent silicates	
144	3055	3247	pit	SFB, Cess pit?	2168	16	20	###	##	##	###	#	#b	1	frequent weeds	CPR Analysis
145	3056	3247	pit	SFB, cess pit?	2168	18	20	####	#	##	###	##	#b	1	frequent weeds. Insect damaged grain	CPR Analysis
146	3056	3247	pit	SFB, cess pit?	2168	2	<1	#	0	0	0	#	0	0	poor preservation	
147	3059	3247	pit	SBF, cess pit?	2168	16	10	##	#	#	##	#	#b	<1	moderate assemblage. Insect damaged grain	
151	3246	3247		SFB? Pit?	2168	14	20	###	0	0	###	#	0	<1	frequent grasses. Insect damaged grain	CPR Analysis

Table 33: Phase 1 samples

Phase 2: 2nd century AD

C.1.14 Thirty-two samples were taken from Phase 2 deposits. The most productive samples are from Groups **2057** and **2686**. Pits **2057**, **2715** and **2745** were located as a pit cluster (Group 2057) in the far south of the main area of excavation. Sample 103, fill 2061 of pit **2057**, is rich in charcoal and also contains frequent spelt wheat chaff. Sample 139, fill 2716 of pit 2715, produced abundant spelt wheat chaff and a moderate assemblage of charred wheat grains, many of which had germinated. Sample 140, fill 2747 of pit 2745 similarly contains abundant spelt chaff with occasional germinated grains. The assemblages within each of these pits most likely represents the use of spelt processing waste as fuel. Such assemblages are frequently found in association with corn dryers or ovens and the fired clay remains of such a feature were found in nearby pit **2700** although the sample from this feature was largely unproductive with regard to charred remains.

C.1.15 Abundant spelt wheat grain and chaff also recovered from Samples 135 (fill 2687) and 136 (fill 2688) in opposite quadrants of SFB **2686**. Both samples also contain a moderate amount of legumes (Fabaceae) and abundant seeds of bromes, corn gromwell and grasses in addition to seeds of corncockle, scentless mayweed , black bindweed and docks. Sample 141, from occupation layer 2843 produced a moderate amount of grain and chaff and also contains occasional mineralised seeds of grasses, dock and annual knawel (*Sherardia arvensis*). Sample 161, fill 3144 of SFB **2686** produced a 30ml flot that is entirely comprised of wheat grains (with both hulled and free-threshing varieties represented), spelt wheat chaff and abundant weed seeds. A

small proportion of the spelt wheat grains displayed evidence of germination through the presence of cereal sprouts and a characteristic change in morphology such as a dorsal groove (caused by the emerging shoot in hulled grain) and shrunken sides. Detached sprouts were also noted.

C.1.16 Other noteworthy Phase 2 features include pit **2121** which contained at least two charcoal-rich fills and produced a significant amount of hammerscale which indicates blacksmithing activities. Pit **2033** contains frequent seeds of pasture/hay plants along with a possible lentil (Lens culinaris).

C.1.17 It is interesting to note that the samples from SFB **2246** have produced very different results from the other Phase 2 SFBs. This is likely to reflect an alternative function for this building (as a smithy/workshop) that was not utilised as a dumping area for crop waste post-demolition. There was no evidence of cess within the samples other than a coprolite that was recovered from the residue of Sample 164 fill 2505, of SFB **2504.**

Sample Number	Context Number	Cut	Feature Type	Function	Group	Volume processed (L)	Flot Volume (ml)	Cereals	Chaff	Legumes	Weed Seeds	Wetland seeds	Charcoal Volume (ml)	Comments	Potential
101	2034	2033	pit		2033	19	25	#	#	#	###	##	<1	Occasional spelt grains and chaff, bread wheat, crop weed seeds and pasture/hay weed seeds. Possible lentil	
103	2061	2057	pit	tanning?/waste	2057	14	55	#	###	#f	#	0	50	Charcoal rich. Occasional spelt, barley, oat grain, spelt glume bases, grass seed	
130	2679	2677	pit	storage?	2057	20	70	#	#	0	0	0	1	poor preservation	
131	2682	2681	kiln?	fire bowl base	2057	9	5	0	0	0	0	0	0	no preservation	
129	2678	2700	kiln?	stoke hole	2057	18	20	##	0	0	#	0	2	poor preservation	
137	2702	2700	pit	storage?	2057	20	10	#	#	#	0	0	<1	poor preservation	
139	2716	2715	pit		2057	18	40	###	#####	#	#	0	<1	abundant spelt chaff, frequent germinated grain and sprouts	CPR Analysis
140	2747	2745	pit	Storage? Dump?	2057	19	50	##	####	0	#	0	5	abundant spelt chaff, occasional germinated grain. Spelt glume base with insect hole	CPR Analysis
123	2295	2293	ditch		2071	8	20	0	0	0	0	0	5	moderate charcoal	
109	2105	2100	pit		2100	14	5	0	0	0	0	0	<1	sparse charcoal only	
106	2122	2121	pit		2100	16	150	0	0	0	0	0	100	charcoal rich	
107	2124	2121	pit		2100	16	750	0	0	0	0	0	700	charcoal rich	
166	2207	2208	post hole		2208	16	20	0	0	0	0	0	<1	poor preservation	
120	2277	2246	skeleton		2246	20	10	0	0	0	0	0	<1	poor preservation	
121	2258	2257	post hole	poss. Post-pipe	2246	4	1	#	0	0	0	0	0	poor preservation	
133	2507	2504	SFB		2246	7	20	#	0	0	0	0	<1	poor preservation	
134	2509	2504	SFB		2246	9	10	#	0	#	0	0	<1	poor preservation	
164	2505	2504	SFB		2246	18	70	##	0	0	0	0	20	poor preservation, moderate charcoal	
150	3207	3206	pit	backfill	2350	18	5	#	#	0	0	0	<1	poor preservation	
126	2564	0	Skeleton		2538	31	40	#	#	0	0	0	<1	poor preservation	
127	2665	2579	pit		2538	20	10	0	0	0	0	0	<1	poor preservation	
128	2667	2579	pit	dump of material	2538	14	10	#	#	0	#	0	1	poor preservation	
112	2172	2187	skeleton		2686	2	1	#	#	#	0	0	<1	poor preservation	
113	2172	2187	skeleton		2686	2	1	#	0	#f	#	0	<1	poor preservation	

Sample Number	Context Number	Cut	Feature Type	Function	Group	Volume processed (L)	Flot Volume (ml)	Cereals	Chaff	Legumes	Weed Seeds	Wetland seeds	Charcoal Volume (ml)	Comments	Potential
114	2172	2187	skeleton		2686	4	5	#	##	#	#	0	<1	poor preservation	
132	2684	2683	grave		2686	18	45	##	#	0	#	0	1	single germinated spelt	
135	2687	2686	sfb		2686	20	60	####	###	##	####	0	5	abundant wheat and abundant grasses	CPR Analysis
136	2688	2686	SFB		2686	20	100	####	####	#	####	0	20	abundant wheat and abundant grasses	CPR Analysis
138	2714	2712		grave fill	2686	14	10	0	#	0	##	0	<1	poor preservation	
141	2843	2836		occupation layer	2686	9	20	##	###	#	##	0	2	frequent spelt chaff, mineralised seeds	MPR & CPR Analysis
142	2867	2739	pit		2739	4	10	#	0	0	#	0	<1	poor preservation	
143	2740	2739	pit	deliberate backfill	2739	9	1	#	0	0	#	0	<1	poor preservation	
161	3149	3146	pit	backfill	2686	16	30	####	#	####	##	0	<1	abundant weeds and frequent FT and hulled wheat	CPR Analysis

Table 34: Phase 2 samples

Phase 3: 2nd – mid-3rd century AD

C.1.18 Samples from deposits within SFB **3093** also suggest that there is special variation within the backfill deposits. Sample 163, fill 3090 and Sample 165, fill 3262, of quadrant **3258** produced an abundance of damaged grain and abundant weed seeds with some evidence of germination. Sample 158, fill 3254 and Samples 159, fill 3252, both of quadrant **3251**, also produced abundant assemblages of damaged charred grain and weed seeds including seeds of wetland plants a mixture of hulled and free-threshing wheat varieties.

Sample	Context Number	Cut	Feature Type	Function	Group	Volume	Flot Volume	Cereals	Chaff	Legumes	Weed Seeds	Wetland/Aquatic Plants	Charcoal	Comments	Potential
125	2537	2535	pit	storage?	2196	17	10	#	0	#	#	0	<1	poor preservation	
160	2672	2726	ditch		2562	17	10	#	#	0	0	0	<1	poor preservation	
149	3090	3258	IN SITU BURNING		3093	14	10	0	#	0	#	0	<1	fuel ash slag	
163	3090	3258	IN SITU BURNING		3093	18	40	####	#	0	###	####	<1	abundant wheat and abundant grasses and rushes	CPR Analysis
158	3254	3251	structure	occupation	3093	8	2	###	0	0	###	##	<1	FT and hulled wheat	CPR Analysis
159	3252	3251	structure	occupation	3093	16	10	####	#	0	##	##	<1	FT and hulled wheat. Insect damaged grain	CPR Analysis
162	3257	3256	pit		3093	18	40	##	#	#	##	#	<1	poor preservation	
165	3262	3258	SFB		3093	8	25	###	##	##	####	#	2	germinated grain and sprouts, insect infected grain, abundant clover and grasses	CPR Analysis

Table 35: Phase 3 samples

Phase 4: 3rd century AD

C.1.19 Phase 4 samples were taken from layers and did not produce significant preserved remains. The most productive sample is from layer 2176 which contains occasional hulled wheat grains and chaff and grass seeds.

Sample Number	Context Number	Cut	Feature Type	Function	Group	Volume processed (L)	Flot Volume (ml)	Cereals	Chaff	Legumes	Weed Seeds	Charcoal Volume (ml)	comments/ Potential
102	2055	0	layer		2188	16	10	0	0	0	0	<1	Mineralised insects-+
118	2202	0	layer	midden/occupation layer	2007	10	1	0	0	0	#	<1	poor preservation
111	2163	0	layer		2007	11	30	#	0	#	#	10	single flax/linseed seed
115	2176	0	layer	domestic/industrial occupation dump	2176	16	50	##	##	0	##	5	hulled wheat and grass seeds
116	2180	0	layer	dump?	2176	19	60	##	#	0	0	5	poor preservation
117	2185		layer	dump	2176	17	20	0	0	0	#	0	poor preservation
119	2199	0	layer	demolition?	2176	20	30	#	#	#	0	<1	poor preservation

Table 36: Phase 4 samples

Discussion

C.1.20 The environmental samples from this site have produced abundant assemblages of charred plant remains that indicate large scale production, processing and possibly storage and transportation of cereal grain. It should be noted that the grain recovered will only be a tiny fraction of what was originally burnt due to the specific requirements required for preservation (Boardman and Jones 1990), which suggests that the amount of original grain was extensive. The charred assemblages from Phases 1, 2 and 3 appear remarkably similar in composition and it is possible that there has been some mixing of material during pit digging in each subsequent phase. There appears to be a decline in activity in the later Roman period.

C.1.21 Hulled wheat predominates within the assemblages along with lesser amounts of free-threshing wheat and barley. The agricultural regime of the Late Roman period in this region saw a dramatic increase in the cultivation of spelt wheat (Lodwick 2017 in Allen *et al*. 2017, 149) with emmer wheat persisting as a minor crop. Free-threshing wheat becomes more common in the mid-Roman period but remains a minority crop in this region (Lodwick *ibid*. 29). Spelt and emmer are hulled wheat varieties in which the grain is tightly enclosed in spikelets that each contain (normally) two grains and snap off easily from the rest of the ear. When the grains are held within the spikelets they are more resistant to insect attack and to accidental germination through exposure to moisture. Hulled wheats, both spelt and emmer, require a number of processing stages in order to release the grain (caryopsis) from the tough outer chaff of the spikelet. This is best described by Hillman (1981) and Wilkinson and Stevens (2003, 195) and involves stages including harvesting, fine sieving, parching and pounding, threshing, winnowing and finally course-sieving to produce clean grain suitable for grinding/milling into flour. The resultant chaff had economic value for its use as kindling and also as pottery temper and fodder (van der Veen 1999). Quernstone fragments were recovered from Phase 2 pit Group 2057 (abundant charred chaff) and also from Phase 3 SFB Group 3093 (less frequent chaff). Barley is most likely to have been a fodder crop and probably beer although spelt wheat beer appears to have been popular during the Roman period. The evidence of germination in many of the Grange Paddocks samples may be the result of deliberate germination (malting) or it may

simply represent spoilt grain that has germinated accidentally due to moisture exposure. There is definite evidence that much of the grain has been damaged by insect and/or fungal attack.

C.1.22 The abundance of weed seeds in these assemblages is potentially significant and may represent more than just the weeds harvested with the crops (that would have been removed during the winnowing and sieving processes). The high proportion of grasses and rushes may relate to the use of hay as animal fodder. It is also possible that wheat was used for thatching the structures as spelt produces long stems that would be ideal for thatch. Free-threshing bread wheat also produced much longer stems than the modern varieties that have been selectively bred to have shorter stems.

Statement of potential

C.1.23 The plant remains recovered from the Roman deposits at Grange Paddocks have the potential to contribute to the wider understanding of the nature and activities of Roman roadside settlements. It is of particular relevance that few comparable environmental assemblages have been produced from previous excavations within this area. This assemblage therefore provides a rare opportunity for a detailed study through identification and quantification of selected assemblages from each phase and the spatial samples taken also have the potential to provide clarification and the suggestion of spatial variation within the individual features. SFBs are relatively rare on Roman sites and analysis of their contents could aid interpretation of these features, particularly with regard to a possible function related to cereal processing. Comparable assemblages of abundant grain, chaff and weed seeds, particularly grasses were recovered from an SFB at Tothill Street, Mister in Thanet, Kent (Cotton 2011).

C.1.24 Further analysis of selected assemblages from each of the three principal phases would potentially allow for a more detailed identification of the three wheat varieties; emmer, spelt and bread wheat and their representation within each phase. As previously noted, bread wheat is not frequently recovered from Roman sites, particularly in the earlier Roman period. The reason for the destruction by burning of such large quantities of grain may be accidental during controlled drying/hardening of the grain but the tentative evidence of the grain being spoilt needs further investigation.

C.1.25 Monolith samples were taken from the dark bands of deposits within a selection of the SFB's. There is limited potential for soil micromorphology (Elizabeth Stafford, OA Geoarchaeologist). It is possible that pollen has been preserved and it is recommended that the monoliths are considered although the high charcoal content is likely to obscure pollen and the non-charcoal fills should be targeted.

Methods statement

C.1.26 Of the sixty samples assessed, 14 have produced assemblages of charred plant remains that are considered to be worthy of further analysis. Where additional buckets of unprocessed sample remains, it is recommended that they are processed to ensure

maximum statistical potential. Individual grains, seeds and chaff elements will be counted, since there is a statistical relationship between the proportions of grain, chaff and weeds which can assist interpretation of the crop-processing stages represented.

C.1.27 Two samples have been taken from a recent watching brief of an adjacent area and will require processing and assessment.

Sample Number	Context Number	Cut	Feature Type	Function	Phase	Group	additional buckets to process	% of deposit	Volume processed (L)	Flot Volume (ml)	Comments
140	2747	2745	pit	Storage? Dump?	2	2057	0	20	19	50	abundant spelt chaff, occasional germinated grain. Spelt glume base with insect hole
141	2843	2836		occupation layer	2	2686	0	100	9	20	frequent spelt chaff, mineralised seeds
148	2973	3247	pit		1	2168	2	10	17	10	FT and hulled wheat, frequent silicates
144	3055	3247	pit	SFB, Cess pit?	1	2168	2	10	16	20	frequent weeds
151	3246	3247		SFB? Pit?	1	2168	2	10	14	20	frequent grasses. Insect damaged grain
139	2716	2715	pit		2	2057	0	10	18	40	abundant spelt chaff, frequent germinated grain and sprouts
158	3254	3251	structure	occupation	3	3093	0	20	8	2	FT and hulled wheat
165	3262	3258	SFB		3	3093	0	20	8	25	germinated grain and sprouts, insect infected grain, abundant clover and grasses
145	3056	3247	pit	SFB, cess pit?	1	2168	4	10	18	20	frequent weeds. Insect damaged grain
161	3144	3143	ditch	backfill	1	2069	2	20	16	30	abundant weeds and frequent FT and hulled wheat
135	2687	2686			2	2686	0	2	20	60	abundant wheat and abundant grasses
136	2688	2686	SFB		2	2686	0	5	20	100	abundant wheat and abundant grasses
163	3090	3258	IN SITU BURNING		3	3093	2	20	18	40	abundant wheat and abundant grasses and rushes
159	3252	3251	structure	occupation	3	3093	2	20	16	10	FT and hulled wheat. Insect damaged grain

Table 37: Samples worthy of further work

C.2 Human skeletal remains by Helen Webb and Natasha Dodwell

Introduction and Provenance

C.2.1 A total of ten articulated immature skeletons (2172, 2277, 2513, 2564, 2685, 3082, 2713, 3082, 3083, 3242, 3277) and a single disarticulated bone (2688) were submitted for osteological analysis. The remains are provisionally dated to the 2nd-3rd century.

C.2.2 With the exception of skeleton 2564, all of the skeletons were recovered from within and around large, sub-rectangular features identified as Roman sunken-featured buildings (SFBs). Skeleton 2564 was recovered from a pit to the south of the site (Pit Group **2037**). Whilst many of the skeletons were disturbed and/or incomplete, it was possible to identify the burial position for some. These varied, with some skeletons lying supine (2172, 2277, 2564) and some crouched, on their side (2713 and 3082 on right side, 3083 on left side). Orientations of the burials also varied (for example, S-N, W-E, SE-NW). The disarticulated bone was recovered from context 2688, a charcoal-rich layer within SFB **2686**, the feature which also contained skeletons 2172, 2513 and 2685, 2713.

C.2.3 All human remains were subject to full osteological analysis and the results are presented below. A statement of potential for further work on the assemblage is given at the end of the report.

Methods

C.2.4 All remains were analysed by reference to the guidelines set out by Brickley and McKinley (2004), Mitchell and Brickley (2017) and Mays *et al* (2004). Analysis of the articulated skeletons involved examining the remains to make observations regarding their condition (Grade 0-5+, after McKinley 2004, 16), completeness (0-25%, 26-50%, 51-75%, 76-100%) and fragmentation ('low', <25% of the skeleton fragmented, 'medium', 25-75% of the skeleton fragmented, or 'high', >75% fragmented).

C.2.5 Estimations of age were based upon dental development (AlQahtani 2009; Moorrees et al 1963), epiphyseal fusion, specifically the tympanic ring and mandibular symphysis (Scheuer and Black 2000) and on metric data, namely long bone lengths and measurements of the pars basilaris and scapula (*ibid*.). In accordance with accepted practice (Brickley 2004, 23), no attempt was made to estimate the sex of the juvenile skeletons.

C.2.6 Any pathological lesions or bony abnormalities were fully recorded, and differential diagnoses explored with reference to appropriate, published texts (for example, Barnes 1994; Lewis 2004; 2007; 2018)

C.2.7 The single disarticulated bone was identified to skeletal element, and a note made on its completeness and condition. Age was also estimated, based on metrical data (Scheuer and Black 2000).

Results

Articulated Skeletons

C.2.8 The results of the osteological analysis of the ten articulated skeletons are summarised in Table 38. Full details are available in the archive.

Skeleton no.	Group	Phase	Completeness	Fragmentation	Condition (McKinley 2004)	Overall preservation	Age estimation	Observations (non-metric traits, pathology etc.)
2172	2686	2	76-100%	Medium	Grade 2	Fair	Neonate (birth - 1 month)	Cranial non-metric trait - Inca bone; Endocranial lesions
2277	2246	2	26-50%	Low	Grade 1	Good	Neonate (birth - 1 month)	
2513	2686	2	0-25%	Low	Grade 1	Good	Neonate (birth - 1 month)	
2564	2037	2	76-100%	High	Grade 1	Fair	Neonate (birth - 1 month)	
2685	2686	2	26-50%	High	Grade 1	Fair	Neonate (birth - 1 month)	Endocranial lesions
2713	2686	2	76-100%	Medium	Grade 1	Good	Neonate (birth - 1 month)	Endocranial lesions
3082	3093	3	76-100%	Medium	Grade 1	Good	Neonate (birth - 1 month)	Endocranial lesions; supernumerary rib
3083	3093	3	26-50%	High	Grade 1	Fair	Infant (1-6 months)	Endocranial lesions
3242	3093	3	26-50%	Medium	Grade 1	Good	Neonate (birth - 1 month)	Endocranial lesions
3277	3093	3	0-25%	Medium	Grade 1	Good	Neonate (birth - 1 month)	

Table 38. Summary of osteological findings

C.2.9 All ten skeletons were immature and it was possible to estimate a more precise age for all of them. Nine of the skeletons (2172, 2277, 2513, 2564, 2685, 2713, 3082, 3242, 3277) were estimated to be neonate, having died around the time of, or up to one month following birth. In all nine of these skeletons, lower limb bone lengths, in conjunction with upper limb bone lengths (for skeletons 2172, 2564, 2685, 2713, 3082 and 3242) and dental development (for skeletons 2172, 2564, 2685 and 2713) were used for age estimation. Skeleton 3083 was estimated to be slightly older, probably an infant between 1 and 6 months. This skeleton was very incomplete, lacking any dentition or complete long bones of the upper or lower limbs. However, measurements taken from the pars basilaris (part of the base of the skull), clavicle and scapula indicated a slightly older age than the other skeletons. Furthermore, the overall appearance of the bones in this skeleton, most notably the ribs, was in keeping with a slightly larger neonate than the rest of the assemblage.

C.2.10 Observations of completed tympanic ring fusion, which occurs from 35 weeks gestation (Scheuer and Black 2000, 82) and/or unfused mandibular symphyses, which normally fuse during the first year of life (*ibid*., 147) were also used to substantiate the age estimations in six skeletons (2172, 2564, 2685, 2713, 3082, 3083).

C.2.11 One skeleton (2172) exhibited a non-metric trait. Non-metric traits are normal variants in skeletal anatomy, which may have a genetic or mechanical aetiology (Brothwell and Zakrzewski 2004). Whilst non-metric traits are not formally scored for juvenile skeletons, this skeleton exhibited a large sutural ossicle at lambda. Sutural ossicles have been proven to be under significant genetic control (Torgersen 1951a, b, 1954; Sjøvold 1984, 1987).

C.2.12 Skeleton 3082 exhibited a developmental anomaly in the form of a thirteenth right rib, the normal number of ribs being 12 on the left and right sides. The supernumerary rib was similar in form to the 12th rib, only smaller. Lumbar ribs are usually bilateral (Barnes 1994, 105) but only 10 left ribs survived, and it was not possible to identify whether any of these was a supernumerary rib. Clinically, it has been reported that individuals with lumbar ribs often experience soreness or even severe pain in the affected region of the back (*ibid*.), although it is assumed that such reports relate to adult clinical data.

C.2.13 The only other type of bony abnormality observed in the assemblage was endocranial lesions, and these were observed in six of the ten skeletons (2172, 2685, 2713, 3082, 3083, 3242). Given that only seven skeletons had observable crania, the true prevalence for this condition calculates as 85.7% (6/7). Endocranial lesions may present as increased porosity/pitting (Type 1), deposits of fibre bone (Type 2), capillary formations (Type 3) or 'hair-on-end' lesions (Type 4) (after Lewis 2004, 90). The types and locations of endocranial lesions observed are summarised in Table 39. The exact aetiology of these lesions is still open to debate, but trauma, primary and secondary infections of meninges, tumours, tuberculosis, syphilis and certain vitamin deficiencies may all result in tearing or inflammation of the meninges, and subsequent new bone formation (*ibid*., 93). It should be highlighted here that differentiating between pathological new bone and that resulting from growth in a young juvenile skeleton is problematic (Lewis 2018, 144-5). It has been argued that fibre bone deposits, particularly in the occipital bone, may simply represent rapid growth in infants (*ibid*.). However, in the present assemblage, all cases of fibre bone (observed in skeletons 2172, 2713, 3082, 3083 and 3242) were seen alongside other types of lesions (porosity/pitting, capillary and hair-on-end lesions), making it likely that the lesions in all of these skeletons were pathological.

Skeleton no.	Type 1 (porosity/pitting)	Type 2 Fibre bone	Type 3 Capillary lesions	Type 4 Hair-on-end lesions
2172	/	Frontal	Frontal Parietal/s Occipital	Parietal/s Occipital

Skeleton no.	Type 1 (porosity/pitting)	Type 2 Fibre bone	Type 3 Capillary lesions	Type 4 Hair-on-end lesions
2685	/	/	Parietal/s	/
2713	/	Parietal/s	/	/
3082	Frontal	Frontal Parietal/s Occipital	Frontal	/
3083	Parietals Occipital	Frontal Parietal/s Occipital	/	/
3242	/	Parietal/s	Parietal/s	/

Table 39. Location of endocranial lesions observed (after Lewis 2004)

Unburnt Disarticulated Bone

C.2.14 The single disarticulated bone (context 2688) was a complete right juvenile tibia. At 54mm in length, the age of the juvenile was estimated to be 34-36 weeks gestation (Fazekas and Kósa (1978), that is, a preterm (<37 weeks) perinate. This bone was evidently small, and from a younger individual than any of the articulated skeletons, thus an additional individual is indicated.

C.2.15 In keeping with the rest of the assemblage, the tibia bore only slight, patchy surface erosion (Grade 1, McKinley 2004). No pathological lesions were observed.

Potential of the Assemblage

C.2.16 Whilst the assemblage of skeletons from Grange Paddocks is not large (10 articulated skeletons, one disarticulated bone: minimum number of individuals represented = 11), it is a valuable addition to the existing body of data for Roman burials in Hertfordshire and further afield. Because it comprises only immature (preterm/neonate/infant) skeletons, the assemblage has the potential to add to our understanding of Roman burial practice and treatment of infants in Hertfordshire and the wider region.

C.2.17 Burials of Roman date have been discovered in several locations around Hertfordshire and the surrounding counties. Probably the most well-known cemeteries with Roman burials are those at Baldock (Burleigh 1980; 1993; Burleigh and Fitzpatrick-Matthews 2010) and the cemetery at St Stephen's, outside *Verulamium*, although here, the majority were cremation burials (Davey 1935; Medlycott 2011, 43). Late Roman cemeteries at Chesterton and Water Newton (on the outskirts of *Durobrivae*) have been excavated, as well as at Watersmeet and Godmanchester (*ibid*.). Excavations at Haslers Lane, Great Dunmow, Essex, revealed burials pertaining to the earliest of the cemeteries associated with the small Roman town (ibid.). At the GSK complex at Ware, approximately 23 burials were recovered from a Late Roman cemetery adjacent to

Roman Ermine Street (Summerfield-Hill 2018). A number of rural Roman cemeteries have been discovered during excavations at Stansted Airport, along the A120 in Essex, at Bartlow Park, Cambridgeshire, and at the CTRL site at Purfleet, Essex (Medlycott 2011, 43). At RAF Lakenheath, scattered inhumations were discovered in ditches and underneath floors (*ibid*.). Of particular, comparative relevance to the Grange Paddocks assemblage are the Roman burials discovered at Itter Crescent, Peterborough, which included 19 neonate burials from ditches, pits and shallow grave cuts within and around domestic buildings (Webb *et al*, forthcoming), the four perinatal/neonates associated with various Roman structures from Upware, Cambs. (OAE 2020) and, the assemblage of neonates from Yewdon, Hambledon Villa, Buckinghamshire (Hassan *et al* 2014; Mays and Eyers 2011; Cocks 1921).

Recommendations

C.2.18 Full osteological analysis was undertaken for this assessment, meaning that no further macroscopic osteological analysis is required. Whilst completeness of the skeletons was varied, bone preservation was good, which allowed for estimations of age in all cases.

C.2.19 The association of perinatal, neonate and young infant burials with Roman buildings or structures is well documented (*e.g.* Philpott 1991, Smith *et al* 2018). Whilst hypotheses including infanticide and careless disposal of remains have been proffered (*e.g.* Mays and Eyers 2011), the link between the domestic environment and immature burials would seem to be more complex (Scott 1991, Moore 2009, Millet and Gowland 2015). Contextualising the immature remains identified at Grange Paddocks, specifically discussing how and where they are interred in the use and the abandonment of the sunken-featured buildings and pits and the site as a whole should be a priority.

C.2.20 The revised research and archaeology framework for the East of England highlighted the need for a synthesis of Roman cemeteries and burial practices (Medlycott 2011, 48) and the immature burials from Grange Paddocks should form part of this analysis. In particular, as an assemblage of perinatal and neonate skeletons, these burials should be considered alongside other, similar contemporary assemblages, including, but not limited to, those from Itter Crescent (Webb *et al* forthcoming) and Old School Lane, Upware (OAE 2020) both of which are in Cambridgeshire and, Yewden, Hambledon Villa (Hassan *et al* 2014; Mays and Eyers 2011; Cocks 1921). In assemblages such as these, it may be relevant to investigate the biological sex of the skeletons. Although some macroscopic methods exist (*e.g.* Schutkowski 1993), ostological estimation of sex in juvenile skeletons is not generally considered reliable (Buikstra and Ubelaker 1994, 16; Brickley 2004, 23; Lewis 2007, 47). Furthermore, few of the Grange Paddocks skeletons actually had the required elements (mandible, ilium) surviving. Alternatively, analysis of aDNA (Brickley and Buckberry 2017; Skoglund *et al* 2012) or dental enamel peptides (Stewart *et al* 2017) may be used for reliable sex estimation. Of the Grange Paddocks immature individuals, six (2172, 2564, 2685, 2713, 3082, 3083) had at least one petrous part surviving. The petrous bone is currently considered one of the most reliable skeletal element for yielding aDNA (Pinhasi *et al*

2015). A total of four skeletons (2172, 2564, 2685, 2713) had at least one tooth surviving that potentially could be used for enamel peptide analysis (Stewart *et al* 2017). Should any work be carried out to estimate the sex of these juvenile skeletons, results should be compared with other, similar assemblages from the surrounding region and further afield in Britain.

C.2.21 Pathology was limited to endocranial lesions and it is unlikely that any further analysis (macroscopic, radiographic *etc*.) will aid interpretation of the lesions, given that their aetiology is open to debate (Lewis 2004). That said, comparison of the pathological lesions observed with similar assemblages may be useful in understanding how the Grange Paddocks infants sit within a wider tradition of Roman infant burial assemblages.

Retention

C.2.22 The human skeletal remains from Grange Paddocks comprise entirely of immature Romano-British individuals in good condition, with substantial potential for further analysis. It is recommended that the remains are retained for future work.

C.2.23 The human skeletal remains from Grange Paddocks are currently held at Oxford Archaeology East under Ministry of Justice burial licence 19-0285. This licence is valid until the 2nd of December 2024, the date by which the remains are to be deposited at the local receiving museum (Bishop's Stortford Museum). If deposition is delayed beyond the aforementioned date, a further Ministry of Justice burial licence deferral application must be completed.

C.3 Faunal remains by Zoe Ui Choileain

Introduction and Methodology

C.3.1 A total of 1391 fragments of countable animal bone was recovered from the Roman settlement at Grange Paddocks. Of these fragments 1061 were from datable features and identifiable to taxon. Of the remaining fragments 330 were large, medium or small unidentified mammal. These have not been discussed further in this report.

C.3.2 The method used to quantify this assemblage was a modified version of that devised by Albarella and Davis (1996). Identification of all bone was attempted but only those that could be clearly narrowed to species were used for NISP (number of identifiable species) and MNI (minimum number of individuals) counts. Both epiphyses and shaft fragments were identified where possible. Fragmented elements are not counted multiple times which narrows down the assemblage and produces more accurate NISP and MNI results. MNI (minimum number of individuals) was calculated for all species present. MNI estimates the smallest number of animals that could be represented by the elements recovered. For the larger domestic mammals only the axis and atlas were counted. Bone identifiable to large or medium mammal was only included where butchery, burning, gnawing or pathology was present. Identification of the faunal remains was carried out at Oxford Archaeology East. References to Hillson (1992), Schmid (1972) were used where needed for identification purposes.

C.3.3 The surface condition of the bone was assessed using the 0-5 scale devised by McKinley where 0 represents no erosion and 5 represents the total erosion of the surface bone (2004, 16, Fig. 6).

C.3.4 Material from samples has not been recorded at this stage.

Results of Analysis

C.3.5 The majority of the assemblage largely derives from features ranged in date from early 1st century AD to the late 3rd century (Phases 1-4). A small amount of material is dated to Phases 5, 6 and 9. This has been recorded in the tables below but not discussed in any detail.

Phase	NISP	MNI
Phase 1	209	32
Phase 2	364	54
Phase 3	249	38
Phase 4	191	22
Phase 5	36	8
Phase 6	6	3
Phase 9	6	3
Totals	**1061**	**160**

Table 40: A summary of NISP (Number of identifiable specimens) and MNI (Minimum number of individuals) by phase

C.3.6 The condition of the cortical bone across this assemblage best represents a one to two on the McKinley scale (Brickley and McKinley 2004, 16 fig6.) This means that most of

the exterior surface is masked by some level of erosion. The fragmentation levels are moderate to high with many bones being insufficiently complete to identify to taxon. Some 137 fragments show signs of gnawing. Tooth marks primarily represent carnivore gnawing but 6 fragments show marks more indicative of rodents.

C.3.7 The bulk of this assemblage represents domestic mammals with only 7 fragments of wild mammal bone recorded across all phases.

C.3.8 The majority of the material is Romano-British and dates from Phase 1 (mid 1st to 2nd century AD) to Phase 4 (3rd century AD). Number of identifiable specimens and minimum number of individuals for Phases 1-4 are displayed in Table 41.

	Phase 1		Phase 2		Phase 3		Phase 4		Phase 1		Phase 2		Phase 3		Phase 4	
Taxon	**NISP**	**NISP%**	**NISP**	**NISP %**	**NISP**	**NISP %**	**NISP**	**NISP %**	**MNI**	**MNI %**	**2 MNI**	**MNI %**	**3 MNI**	**MNI%**	**4 MNI**	**MNI %**
Bird	3	1.44	11	3.02	2	8.03	5	2.62	1	7.69	1	5.55	1	6.66	1	9.09
Cattle (*Bos Taurus*)	89	42.58	136	37.36	118	47.39	78	40.8	2	15.4	5	27.77	4	26.7	2	18.18
Chicken	1	0.48	5	1.37	2	8.03	1	0.52	1	7.69	1	5.55	1	6.66	1	9.09
Dog (*Canis familiaris*)	1	0.48	6	1.65	6	2.41	2	1.05	1	7.69	1	5.55	2	13.3	1	9.09
Goose	1	0.48	0	0	0	0	0	0	1	7.69	0	0	0	0	0	0
Horse (*Equus callabus*)	7	3.34	14	3.85	5	2	3	1.57	1	7.69	2	11.11	1	6.66	1	9.09
Pig (*Sus sus*)	11	5.26	27	7.42	9	3.61	18	9.42	2	15.4	3	16.66	2	13.3	2	18.18
Red Deer	0	0	1	0.27	0	0	0	0	0	0	1	5.55	0	0	0	0
Roe deer	1	0.48	0	0	2	8.03	2	1.05	1	7.69	0	0	1	6.66	1	9.09
Sheep/goat (*Ovis/Capra*)	95	45.45	164	45.05	105	42.17	82	42.9	3	23.1	4	22.22	3	20	2	18.18
Totals	**304**	**100**	**364**	**100**	**131**	**100**	**104**	**100**	**13**	**100**	**18**	**100**	**15**	**100**	**11**	**100**

Table 41: Phase 1-4 NISP (Number of identifiable specimens) and MNI (Minimum number of individuals)

C.3.9 The is a significant rise in both cattle and sheep bone in Phases 1 and 2, with numbers beginning to drop in Phase 4. It is possible that this reflects the height of the settlement period. Fused and unfused bone was recorded for cattle and sheep and it is likely that animals were bred on site. There is a slow increase in pig bone to a much lesser extent.

C.3.10 These percentages fit with the body of knowledge regarding Roman dietary practices. King (1978) recorded an increase in cattle in the more Romanised sites – such as forts, villas and roadside settlements. The significant rises in sheep/goat possibly represents the increase in milk and wool farming which appears to be occurring to a greater extent at Grange Paddocks than at nearby site Whittington Way (Clarke 2020). The slight rise in pig bone most likely represents the rise in popularity of pork as a delicacy during the Roman period.

C.3.11 It is important to note that there is a high percentage of cattle and sheep/goat mandibles when compared to any other element. In order to avoid biasing the sample mandible counts have not been included when calculating MNI numbers. It is possible that this relates to methods of bone disposal and this should be investigated further during the analysis stage.

C.3.12 There is considerably less bone from Phases 5 and 6 and this seems to represent a decline in the usage of the site. NISP and MNI numbers from these phases are displayed in the tables below.

Taxon	NISP	NISP %	MNI	MNI %
Bird	2	5.55	1	20
Cattle (*Bos Taurus*)	20	55.55	1	20
Horse (*Equus callabus*)	2	5.55	1	20
Pig (*Sus sus*)	3	8.33	1	20
Sheep/goat (*Ovis/Capra*)	9	25	1	20
Totals	**36**	**100**	**5**	**100**

Table 42: Phase 5 NISP (number of identifiable specimens) and MNI (minimum number of individuals)

Taxon	NISP	NISP %	MNI	MNI %
Cattle (*Bos Taurus*)	3	50	1	33.33
Pig (*Sus sus*)	1	16.66	1	33.33
Sheep/goat (*Ovis/Capra*)	2	33.33	1	33.33
Totals	**6**	**100**	**3**	**100**

Table 43: Phase 6 NISP (number of identifiable specimens) and MNI (minimum number of individuals)

C.3.13 The assemblage displays a high degree of butchery, with 129 fragments having cut or chop marks. For the most part these are indicative of domestic waste, as displayed by multiple chop marks on many fragments. While a small number of worked bone items was recorded there is little to suggest any kind of industry.

C.3.14 Phase 9 is unstratified material from topsoil and subsoil and the faunal remains recovered are tabulated below.

Taxon	NISP	NISP %	MNI	MNI %
Cattle (*Bos Taurus*)	2	33.33	1	33.33
Red Deer	1	16.66	1	33.33
Sheep/goat (*Ovis/Capra*)	3	50	1	33.33
Totals	**6**	**100**	**3**	**100**

Table 44: Phase 9 NISP (number of identifiable specimens) and MNI (minimum number of individuals)

C.3.15 The assemblage displays a high degree of butchery, with 129 fragments having cut or chop marks. For the most part these are indicative of domestic waste, as displayed by multiple chop marks on many fragments.

Statement of Potential

C.3.16 There is a high potential for aging data to be gathered from this site with 396 fragments of bone providing fusion data and 179 fragments providing tooth wear data. Biometric measurements are possible for 82 samples with 8 bones having the potential to provide withers height estimates. Sex estimation is possible on 21 fragments.

C.3.17 Overall this assemblage has high potential for providing information on dietary and butchery practice throughout the life of the roadside settlement. By plotting the distribution of butchered bone (including butchery related elements) as well as gnawed fragments it may be possible to identify differences in waste disposal across the site and explore the functions of different areas of the site.

Retention, Dispersal and Display

C.3.18 All stratified material should be retained for the archaeological record, further recommendations for retention will be made following full analysis of the assemblage.

Faunal remains catalogue

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2008	0	2188	4	layer	Cattle	Femur	1	1
2008	0	2188	4	layer	Sheep/Goat	Loose max cheek tooth	3	1
2008	0	2188	4	layer	Large mammal	Long bone	1	2
2008	0	2188	4	layer	Cattle	Mandible	1	2
2008	0	2188	4	layer	Medium mammal	Tibia	1	2
2008	0	2188	4	layer	Cattle	Horncore	1	2
2010	2109	2109	1	pit	Sheep/Goat	Mandible	1	2
2010	2109	2109	1	pit	Sheep/Goat	Loose mand cheek tooth	8	1
2010	2109	2109	1	pit	Cattle	Loose mand cheek tooth	2	2
2010	2109	2109	1	pit	Large mammal	Rib	1	1
2010	2109	2109	1	pit	Large mammal	Humerus	1	1
2010	2109	2109	1	pit	Large mammal	Mandible	1	2
2010	2109	2109	1	pit	Large mammal	Pelvis	1	2
2010	2109	2109	1	pit	Sheep/Goat	Mandible	1	2
2010	2109	2109	1	pit	Cattle	Skull	1	2
2010	2109	2109	1	pit	Bird	Furcula	1	1
2010	2109	2109	1	pit	Sheep/Goat	Loose max cheek tooth	4	1
2010	2109	2109	1	pit	Cattle	PH1	1	2
2010	2109	2109	1	pit	Cattle	PH1	1	2
2010	2109	2109	1	pit	Medium mammal	Long bone	3	2
2010	2109	2109	1	pit	Medium mammal	Metatarsus	1	2
2010	2109	2109	1	pit	Cattle	Radius	1	2
2010	2109	2109	1	pit	Sheep/Goat	Tibia	1	1
2010	2109	2109	1	pit	Bird	Long bone	1	1
2010	2109	2109	1	pit	Cattle	Metatarsus	1	1
2011	2109	2109	1	pit	Sheep/Goat	Mandible	1	1
2011	2109	2109	1	pit	Sheep/Goat	Maxilla	1	1
2011	2109	2109	1	pit	Large mammal	Long bone	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2011	2109	2109	1	pit	Cattle	Loose mand cheek tooth	1	1
2011	2109	2109	1	pit	Medium mammal	Metapodial	1	2
2013	2012	2012	2	ditch	Horse	Tibia	1	1
2013	2012	2012	2	ditch	Cattle	Mandible	1	2
2013	2012	2012	2	ditch	Large mammal	Femur	1	2
2016	2014	2014	2	ditch	Large mammal	Long bone	17	1
2016	2014	2014	2	ditch	Pig	Mand Canine	1	2
2016	2014	2014	2	ditch	Cattle	Skull	1	2
2016	2014	2014	2	ditch	Sheep/Goat	Calcaneus	1	1
2016	2014	2014	2	ditch	Sheep/Goat	Pelvis	1	1
2016	2014	2014	2	ditch	Sheep/Goat	Femur	1	2
2016	2014	2014	2	ditch	Sheep/Goat	Loose mandibular row	1	1
2016	2014	2014	2	ditch	Medium mammal	Metatarsus	1	2
2016	2014	2014	2	ditch	Sheep/Goat	Metacarpus	1	1
2016	2014	2014	2	ditch	Sheep/Goat	Mandible	1	2
2016	2014	2014	2	ditch	Sheep/Goat	Mandible	1	2
2016	2014	2014	2	ditch	Large mammal	Rib	1	2
2017	2014	2014	2	ditch	Bird	Coracoid	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Mandible	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Tibia	1	1
2017	2014	2014	2	ditch	Medium mammal	Long bone	21	2
2017	2014	2014	2	ditch	Cattle	Metapodial	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Humerus	1	3
2017	2014	2014	2	ditch	Dog	Mandible	1	1
2017	2014	2014	2	ditch	Bird	Ulna	1	1
2017	2014	2014	2	ditch	Bird	Clavicle	1	1
2017	2014	2014	2	ditch	Cattle	Humerus	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Mandible	1	1
2017	2014	2014	2	ditch	Cattle	Maxilla	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Loose mand cheek tooth	5	1
2017	2014	2014	2	ditch	Horse	Scapula	1	2
2017	2014	2014	2	ditch	Cattle	Horncore	1	2
2017	2014	2014	2	ditch	Cattle	Horncore	1	2
2017	2014	2014	2	ditch	Cattle	Metacarpus	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Mandible	1	1
2017	2014	2014	2	ditch	Cattle	Maxilla	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Mandible	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Skull	1	1
2017	2014	2014	2	ditch	Cattle	Loose maxillary row	3	1
2017	2014	2014	2	ditch	Large mammal	Humerus	1	1

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2017	2014	2014	2	ditch	Large mammal	Humerus	1	1
2017	2014	2014	2	ditch	Cattle	Tibia	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Metatarsus	1	1
2017	2014	2014	2	ditch	Cattle	Skull	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Maxilla	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Metatarsus	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Metacarpus	1	1
2017	2014	2014	2	ditch	Medium mammal	Metatarsus	1	1
2017	2014	2014	2	ditch	Medium mammal	Femur	1	1
2017	2014	2014	2	ditch	Cattle	Metatarsus	1	2
2017	2014	2014	2	ditch	Sheep/Goat	Maxilla	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Radius	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Maxilla	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Mandible	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Mandible	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Mandible	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Mandible	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Mandible	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Mandible	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Metatarsus	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Maxilla	1	1
2017	2014	2014	2	ditch	Sheep/Goat	Tibia	1	1
2023	2026	2026	2	pit	Medium mammal	Calcaneus	1	3
2023	2026	2026	2	pit	Medium mammal	Metatarsus	1	3
2024	2026	2026	2	pit	Cattle	Loose max cheek tooth	1	1
2027	2029	2026	2	pit	Sheep/Goat	Mandible	1	2
2027	2029	2026	2	pit	Sheep/Goat	Mandible	1	2
2027	2029	2026	2	pit	Cattle	Loose max cheek tooth	1	1
2031	2030	2014	2	ditch	Medium mammal	Metapodial	1	3
2031	2030	2014	2	ditch	Sheep/Goat	Mandible	1	2
2034	2033	2033	2	pit	Cattle	Metacarpus	1	1
2034	2033	2033	2	pit	Sheep/Goat	Scapula	1	1
2034	2033	2033	2	pit	Medium mammal	Long bone	11	2
2034	2033	2033	2	pit	Sheep/Goat	Mandible	1	2
2035	2033	2033	2	pit	Cattle	Loose mand cheek tooth	1	1
2035	2033	2033	2	pit	Sheep/Goat	Mandible	1	1
2035	2033	2033	2	pit	Large mammal	Long bone	1	1
2035	2033	2033	2	pit	Large mammal	Long bone	1	1
2035	2033	2033	2	pit	Large mammal	Femur	1	1
2036	2033	2033	2	pit	Sheep/Goat	Metacarpus	1	3

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2038	2037	2037	1	pit	Cattle	Metapodial	1	3
2039	2037	2037	1	pit	Cattle	Metapodial	1	4
2040	2037	2037	1	pit	Medium mammal	Metapodial	1	3
2041	2037	2037	1	pit	Cattle	Metatarsus	1	1
2042	2037	2037	1	pit	Cattle	Metatarsus	1	2
2042	2037	2037	1	pit	Large mammal	Pelvis	1	2
2043	2037	2037	1	pit	Cattle	Ulna	1	2
2044	2037	2037	1	pit	Cattle	Radius	1	2
2044	2037	2037	1	pit	Cattle	PH1	1	2
2044	2037	2037	1	pit	Pig	Loose mand cheek tooth	1	1
2044	2037	2037	1	pit	Cattle	Metacarpus	1	2
2044	2037	2037	1	pit	Cattle	Astragalus	1	2
2044	2037	2037	1	pit	Cattle	PH2	1	2
2044	2037	2037	1	pit	Medium mammal	Long bone	1	1
2044	2037	2037	1	pit	Sheep/Goat	Loose max cheek tooth	1	1
2045	2037	2037	1	pit	Sheep/Goat	Loose max cheek tooth	1	1
2045	2037	2037	1	pit	Sheep/Goat	Horncore	1	2
2048	0	2188	4	layer	Cattle	PH1	1	2
2048	0	2188	4	layer	Large mammal	Scapula	1	2
2055	0	2188	4	layer	Sheep/Goat	PH1	1	1
2055	0	2188	4	layer	Pig	Mand Canine	1	1
2055	0	2188	4	layer	Sheep/Goat	Mandible	1	2
2056	0	2188	4	layer	Sheep/Goat	Loose max cheek tooth	2	1
2056	0	2188	4	layer	Sheep/Goat	Metapodial	1	2
2056	0	2188	4	layer	Sheep/Goat	PH1	1	1
2056	0	2188	4	layer	Sheep/Goat	Tibia	1	1
2058	2057	2057	2	pit	Medium mammal	Femur	1	2
2061	2057	2057	2	pit	Medium mammal	Metacarpus	1	2
2061	2057	2057	2	pit	Bird	Long bone	2	1
2062	2057	2057	2	pit	Cattle	Tibia	1	1
2062	2057	2057	2	pit	Large mammal	Femur	1	2
2062	2057	2057	2	pit	Sheep/Goat	Scapula	1	1
2062	2057	2057	2	pit	Cattle	Radius	1	1
2062	2057	2057	2	pit	Chicken	Metatarsus	1	1
2062	2057	2057	2	pit	Cattle	Metatarsus	1	2
2062	2057	2057	2	pit	Sheep/Goat	Loose max cheek tooth	1	2
2063	2057	2057	2	pit	Cattle	Radius	1	2
2063	2057	2057	2	pit	Sheep/Goat	Mandible	1	1
2063	2057	2057	2	pit	Large mammal	Long bone	10	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2063	2057	2057	2	pit	Cattle	Horncore	1	1
2063	2057	2057	2	pit	Cattle	Loose max cheek tooth	3	2
2063	2057	2057	2	pit	Cattle	Horncore	1	1
2063	2057	2057	2	pit	Large mammal	Radius	1	2
2063	2057	2057	2	pit	Sheep/Goat	Radius	1	2
2063	2057	2057	2	pit	Medium mammal	Calcaneus	1	3
2063	2057	2057	2	pit	Sheep/Goat	Mandible	1	2
2063	2057	2057	2	pit	Cattle	Metapodial	1	3
2065	2971	2079	1	pit	Cattle	Loose mand cheek tooth	1	1
2065	2971	2079	1	pit	Cattle	Loose max cheek tooth	1	1
2065	2971	2079	1	pit	Sheep/Goat	Humerus	1	2
2065	2971	2079	1	pit	Sheep/Goat	Scapula	1	1
2066	2971	2079	1	pit	Cattle	Calcaneus	1	3
2066	2971	2079	1	pit	Cattle	Mandible	1	3
2070	2069	2069	1	ditch	Cattle	Tibia	1	2
2070	2069	2069	1	ditch	Cattle	Horncore	1	2
2070	2069	2069	1	ditch	Cattle	Loose mand cheek tooth	1	2
2072	2071	2071	2	ditch	Sheep/Goat	Mandible	1	2
2072	2071	2071	2	ditch	Cattle	Metacarpus	1	1
2074	2073	2073	3	ditch	Sheep/Goat	Metapodial	1	2
2074	2073	2073	3	ditch	Cattle	Radius	1	2
2074	2073	2073	3	ditch	Cattle	Loose mand cheek tooth	1	1
2075	2109	2109	1	pit	Cattle	Tibia	1	2
2075	2109	2109	1	pit	Medium mammal	Femur	1	2
2075	2109	2109	1	pit	Sheep/Goat	Loose max cheek tooth	1	1
2075	2109	2109	1	pit	Sheep/Goat	Metacarpus	1	2
2076	2195	2109	1	pit	Cattle	Incisor	5	1
2076	2195	2109	1	pit	Sheep/Goat	Loose mand cheek tooth	2	1
2076	2195	2109	1	pit	Cattle	Loose max cheek tooth	2	1
2076	2195	2109	1	pit	Cattle	Humerus	1	2
2076	2195	2109	1	pit	Cattle	Mandible	1	2
2076	2195	2109	1	pit	Cattle	Mandible	1	2
2076	2195	2109	1	pit	Cattle	Maxilla	1	2
2076	2195	2109	1	pit	Cattle	Maxilla	1	2
2076	2195	2109	1	pit	Cattle	Skull	1	2
2076	2195	2109	1	pit	Sheep/Goat	Loose max cheek tooth	1	1
2077	0	2188	4	layer	Medium mammal	Tibia	1	1
2077	0	2188	4	layer	Sheep/Goat	Humerus	1	3

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2078	2109	2109	1	pit	Medium mammal	Femur	1	2
2080	2079	2079	1	pit	Cattle	Mandible	1	3
2082	2081	2081	2	ditch	Cattle	Metacarpus	1	2
2082	2081	2081	2	ditch	Medium mammal	Femur	1	1
2082	2081	2081	2	ditch	Large mammal	Humerus	1	1
2082	2081	2081	2	ditch	Sheep/Goat	Loose max cheek tooth	1	1
2082	2081	2081	2	ditch	Medium mammal	Long bone	2	1
2082	2081	2081	2	ditch	Cattle	Skull	1	1
2084	2083	2014	2	ditch	Cattle	PH1	1	1
2084	2083	2014	2	ditch	Bird	Femur	1	1
2084	2083	2014	2	ditch	Cattle	Humerus	1	1
2084	2083	2014	2	ditch	Large mammal	Tibia	1	1
2084	2083	2014	2	ditch	Cattle	Horncore	1	2
2085	0	2052	1	ditch	Medium mammal	Pelvis	1	1
2085	0	2052	1	ditch	Cattle	Mandible	3	1
2085	0	2052	1	ditch	Horse	Metacarpus	1	1
2085	0	2052	1	ditch	Horse	PH2	1	1
2085	0	2052	1	ditch	Horse	PH1	1	2
2085	0	2052	1	ditch	Cattle	Mandible	1	2
2098		2007	4	layer	Cattle	Maxilla	1	2
2098		2007	4	layer	Cattle	Maxilla	1	2
2098		2007	4	layer	Pig	Maxilla	1	2
2098		2007	4	layer	Cattle	PH1	1	2
2098		2007	4	layer	Sheep/Goat	PH1	1	1
2099		2007	4	layer	Cattle	Metacarpus	1	2
2099		2007	4	layer	Cattle	Humerus	1	4
2099		2007	4	layer	Cattle	Horncore	1	3
2099		2007	4	layer	Cattle	Mandible	1	3
2099		2007	4	layer	Cattle	Radius	1	2
2099		2007	4	layer	Large mammal	Long bone	4	1
2099		2007	4	layer	Sheep/Goat	Scapula	1	1
2102	2100	2100	2	pit	Cattle	Metacarpus	1	1
2102	2100	2100	2	pit	Sheep/Goat	Metacarpus	1	1
2103	2100	2100	2	pit	Large mammal	Radius	1	3
2103	2100	2100	2	pit	Cattle	Loose mand cheek tooth	1	1
2103	2100	2100	2	pit	Sheep/Goat	Metapodial	1	3
2103	2100	2100	2	pit	Large mammal	Rib	1	2
2103	2100	2100	2	pit	Cattle	Horncore	1	2
2103	2100	2100	2	pit	Pig	Tibia	1	3
2103	2100	2100	2	pit	Cattle	Scapula	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2103	2100	2100	2	pit	Sheep/Goat	Loose mand cheek tooth	1	1
2103	2100	2100	2	pit	Sheep/Goat	Pelvis	1	1
2104	2100	2100	2	pit	Dog	Mandible	1	2
2104	2100	2100	2	pit	Large mammal	Rib	1	2
2104	2100	2100	2	pit	Large mammal	Rib	1	2
2104	2100	2100	2	pit	Medium mammal	Scapula	1	3
2104	2100	2100	2	pit	Large mammal	Calcaneus	1	3
2104	2100	2100	2	pit	Cattle	PH1	1	2
2104	2100	2100	2	pit	Cattle	PH1	1	2
2107	2106	2073	3	ditch	Cattle	Scapula	1	2
2107	2106	2073	3	ditch	Cattle	Humerus	1	2
2107	2106	2073	3	ditch	Cattle	Loose mand cheek tooth	1	2
2107	2106	2073	3	ditch	Cattle	Metacarpus	1	2
2107	2106	2073	3	ditch	Cattle	Metatarsus	1	1
2120	2119	2117	3	post hole	Large mammal	Tibia	1	4
2129	2121	2100	2	pit	Cattle	Mandible	1	2
2134	2133	2071	2	ditch	Sheep/Goat	Mandible	1	2
2134	2133	2071	2	ditch	Cattle	Loose mand cheek tooth	1	2
2134	2133	2071	2	ditch	Cattle	Metapodial	1	2
2157	0	2007	4	layer	Cattle	Metacarpus	1	1
2157	0	2007	4	layer	bird	Coracoid	1	1
2157	0	2007	4	layer	Medium mammal	Femur	1	1
2157	0	2007	4	layer	Medium mammal	Radius	1	4
2157	0	2007	4	layer	Sheep/Goat	Metatarsus	1	3
2157	0	2007	4	layer	Medium mammal	Long bone	3	1
2158	0	2007	4	layer	Sheep/Goat	Calcaneus	1	4
2158	0	2007	4	layer	Sheep/Goat	Scapula	1	0
2158	0	2007	4	layer	Sheep/Goat	Metatarsus	1	2
2158	0	2007	4	layer	Sheep/Goat	Humerus	1	3
2159		2007	4	layer	Pig	Mandible	1	2
2159		2007	4	layer	Large mammal	Rib	1	1
2160	0	2007	4	layer	Medium mammal	Humerus	1	2
2160	0	2007	4	layer	Sheep/Goat	Radius	1	1
2161	0	2007	4	layer	Large mammal	Pelvis	1	2
2162	0	2007	4	layer	Sheep/Goat	Mandible	1	2
2162	0	2007	4	layer	Large mammal	Humerus	1	2
2162	0	2007	4	layer	Cattle	Metapodial	1	1
2163	0	2007	4	layer	Cattle	Metacarpus	1	1
2163	0	2007	4	layer	Sheep/Goat	Mandible	1	2
2163	0	2007	4	layer	Cattle	PH1	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2163	0	2007	4	layer	Cattle	Metatarsus	1	1
2163	0	2007	4	layer	Sheep/Goat	Tibia	1	1
2163	0	2007	4	layer	Sheep/Goat	Tibia	1	2
2163	0	2007	4	layer	Sheep/Goat	Metacarpus	1	2
2163	0	2007	4	layer	Bird	Radius	1	1
2163	0	2007	4	layer	Medium mammal	Indet	3	3
2163	0	2007	4	layer	Sheep/Goat	Mandible	1	2
2163	0	2007	4	layer	Bird	Long bone	2	1
2163	0	2007	4	layer	Sheep/Goat	Loose mand cheek tooth	9	1
2164	0	2007	4	layer	Sheep/Goat	Loose mand cheek tooth	1	2
2164	0	2007	4	layer	Sheep/Goat	Mandible	1	2
2164	0	2007	4	layer	Sheep/Goat	Mandible	1	2
2164	0	2007	4	layer	Pig	Maxilla	1	2
2164	0	2007	4	layer	Large mammal	Rib	1	2
2164	0	2007	4	layer	Large mammal	Rib	1	2
2164	0	2007	4	layer	Large mammal	Metapodial	1	3
2164	0	2007	4	layer	Medium mammal	Rib	1	1
2164	0	2007	4	layer	Sheep/Goat	Long bone	1	1
2164	0	2007	4	layer	Medium mammal	Radius	1	2
2164	0	2007	4	layer	Medium mammal	Tibia	1	3
2164	0	2007	4	layer	Sheep/Goat	PH1	1	1
2164	0	2007	4	layer	Sheep/Goat	Humerus	1	3
2164	0	2007	4	layer	Cattle	Metapodial	1	2
2164	0	2007	4	layer	Pig	Scapula	1	2
2170	2168	2168	1	pit	Cattle	Ulna	1	2
2170	2168	2168	1	pit	Sheep/Goat	Humerus	1	3
2170	2168	2168	1	pit	Cattle	PH1	1	2
2170	2168	2168	1	pit	Sheep/Goat	Loose max cheek tooth	1	1
2172	2187	2686	2	skeleton	Sheep/Goat	Tibia	1	2
2172	2187	2686	2	skeleton	Cattle	Scapula	1	2
2173	0	2188	4	layer	Cattle	Radius	1	3
2173	0	2188	4	layer	Cattle	Metatarsus	1	2
2173	0	2188	4	layer	Cattle	Metacarpus	1	2
2173	0	2188	4	layer	Large mammal	Vertebra	1	2
2173	0	2188	4	layer	Large mammal	Pelvis	1	2
2173	0	2188	4	layer	Horse	Astragalus	1	2
2174	0	2188	4	layer	Cattle	Metacarpus	1	2
2174	0	2188	4	layer	Cattle	Radius	1	2
2174	0	2188	4	layer	Cattle	Astragalus	1	1
2174	0	2188	4	layer	Cattle	Astragalus	1	1

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2174	0	2188	4	layer	Cattle	Astragalus	1	1
2174	0	2188	4	layer	Cattle	PH1	1	1
2174	0	2188	4	layer	Cattle	Maxilla	1	2
2174	0	2188	4	layer	Cattle	Loose max cheek tooth	1	1
2174	0	2188	4	layer	Cattle	Loose mandibular row	1	1
2174	0	2188	4	layer	Sheep/Goat	Mandible	1	2
2174	0	2188	4	layer	Sheep/Goat	Loose mand cheek tooth	1	1
2174	0	2188	4	layer	Pig	Metapodial	1	1
2174	0	2188	4	layer	Sheep/Goat	Mandible	1	2
2174	0	2188	4	layer	Large mammal	Vertebra	1	2
2174	0	2188	4	layer	Large mammal	Humerus	1	2
2174	0	2188	4	layer	Large mammal	Rib	1	1
2174	0	2188	4	layer	Large mammal	Rib	1	2
2174	0	2188	4	layer	Large mammal	Rib	1	2
2174	0	2188	4	layer	Cattle	Humerus	1	2
2174	0	2188	4	layer	Cattle	Pelvis	1	2
2174	0	2188	4	layer	Large mammal	Humerus	1	1
2174	0	2188	4	layer	Horse	Loose mand cheek tooth	1	2
2174	0	2188	4	layer	Sheep/Goat	Scapula	1	2
2174	0	2188	4	layer	Sheep/Goat	Metacarpus	1	2
2174	0	2188	4	layer	Large mammal	Skull	1	2
2174	0	2188	4	layer	Cattle	Mandible	1	2
2174	0	2188	4	layer	Dog	Humerus	1	1
2175	0	2188	4	layer	Sheep/Goat	Loose max cheek tooth	1	1
2175	0	2188	4	layer	Large mammal	Pelvis	1	2
2176	0	2176	4	layer	Pig	Loose mand cheek tooth	1	1
2176	0	2176	4	layer	Sheep/Goat	Loose max cheek tooth	1	1
2178	0	2176	4	layer	Large mammal	Pelvis	1	2
2178	0	2176	4	layer	Large mammal	Mandible	1	2
2178	0	2176	4	layer	Pig	Incisor	1	1
2178	0	2176	4	layer	Sheep/Goat	Humerus	1	3
2178	0	2176	4	layer	Cattle	Humerus	1	2
2178	0	2176	4	layer	Pig	Humerus	1	2
2179	0	2176	4	layer	Cattle	Metatarsus	1	2
2179	0	2176	4	layer	Cattle	Loose max cheek tooth	1	1
2179	0	2176	4	layer	Medium mammal	Metacarpus	1	2
2180	0	2176	4	layer	Sheep/Goat	Mandible	1	1
2180	0	2176	4	layer	Cattle	Metapodial	1	2
2180	0	2176	4	layer	Pig	Incisor	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2181	0	2176	4	layer	Medium mammal	Scapula	1	2
2186	2232	2686	2	PIT	Sheep/Goat	Mandible	1	1
2188	0	2188	4	layer	Cattle	Humerus	1	3
2189	0	2188	4	layer	Sheep/Goat	Metacarpus	1	2
2190	0	2188	4	layer	Pig	Metapodial	1	2
2191	0	2188	4	layer	Sheep/Goat	Mandible	1	2
2191	0	2188	4	layer	Sheep/Goat	Loose max cheek tooth	1	1
2191	0	2188	4	layer	Large mammal	Sacrum	1	1
2191	0	2188	4	layer	Large mammal	Long bone	1	1
2194	2393	2378	3	PIT	Sheep/Goat	Mandible	1	1
2194	2393	2378	3	PIT	Sheep/Goat	Metacarpus	1	1
2194	2393	2378	3	PIT	Sheep/Goat	Maxilla	1	1
2194	2393	2378	3	PIT	Sheep/Goat	Mandible	1	1
2194	2393	2378	3	PIT	Sheep/Goat	Mandible	1	1
2194	2393	2378	3	PIT	Sheep/Goat	Loose mand cheek tooth	3	1
2197	2196	2196	3	pit	Cattle	Pelvis	1	2
2197	2196	2196	3	pit	Cattle	PH1	1	2
2197	2196	2196	3	pit	Cattle	Loose mand cheek tooth	1	1
2200	2278	3091	6	ditch	Cattle	Loose mandibular row	3	1
2200	2278	3091	6	ditch	Cattle	Mandible	1	2
2201	0	2007	4	layer	Pig	Maxilla	1	2
2201	0	2007	4	layer	Chicken	Ulna	1	1
2201	0	2007	4	layer	Cattle	Loose max cheek tooth	1	1
2202	0	2007	4	layer	Cattle	Loose mandibular row	1	1
2202	0	2007	4	layer	Cattle	Radius	1	3
2202	0	2007	4	layer	Cattle	Ulna	1	3
2202	0	2007	4	layer	Medium mammal	Long bone	2	1
2202	0	2007	4	layer	Pig	Loose mand cheek tooth	1	2
2203	0	2007	4	layer	Cattle	Metacarpus	1	1
2203	0	2007	4	layer	Cattle	Metatarsus	1	3
2203	0	2007	4	layer	Medium mammal	Metacarpus	1	2
2203	0	2007	4	layer	Cattle	Calcaneus	1	2
2203	0	2007	4	layer	Cattle	Radius	1	2
2203	0	2007	4	layer	Cattle	Loose maxillary row	1	1
2203	0	2007	4	layer	Cattle	Humerus	1	2
2203	0	2007	4	layer	Pig	Loose mand cheek tooth	1	1
2204	0	2007	4	layer	Large mammal	Skull	1	2
2204	0	2007	4	layer	Sheep/Goat	Mandible	1	1
2204	0	2007	4	layer	Medium mammal	Pelvis	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2204	0	2007	4	layer	Medium mammal	Tibia	1	2
2204	0	2007	4	layer	Cattle	Metapodial	1	2
2205		2007	4	layer	Sheep/Goat	Metatarsus	1	2
2205		2007	4	layer	Roe Deer	Metatarsus	1	3
2205		2007	4	layer	Medium mammal	Tibia	1	2
2205		2007	4	layer	Sheep/Goat	Humerus	1	3
2205		2007	4	layer	Cattle	Metatarsus	1	1
2205		2007	4	layer	Cattle	Skull	1	2
2205		2007	4	layer	Sheep/Goat	Radius	1	2
2205		2007	4	layer	Large mammal	Pelvis	1	2
2205		2007	4	layer	Sheep/Goat	Mandible	1	2
2205		2007	4	layer	Sheep/Goat	Mandible	1	2
2205		2007	4	layer	Medium mammal	Long bone	1	2
2205		2007	4	layer	Pig	Metacarpus	1	2
2205		2007	4	layer	Pig	Calcaneus	1	3
2205		2007	4	layer	Roe Deer	Metatarsus	1	3
2206	0	2007	4	layer	Medium mammal	Humerus	1	2
2206	0	2007	4	layer	Sheep/Goat	Mandible	1	2
2206	0	2007	4	layer	Sheep/Goat	Mandible	1	2
2206	0	2007	4	layer	Sheep/Goat	Loose max cheek tooth	2	1
2206	0	2007	4	layer	Sheep/Goat	Loose mand cheek tooth	1	1
2206	0	2007	4	layer	Medium mammal	Radius	1	1
2207	2208	2208	2	post hole	Sheep/Goat	Humerus	1	2
2234	2233	2287	5	ditch	Cattle	Metapodial	1	1
2235	2233	2287	5	ditch	Cattle	Mandible	1	3
2237	2236	2002	1	DITCH	Cattle	Mandible	1	2
2247	2246	2246	2	SFB	Cattle	Axis	1	2
2247	2246	2246	2	SFB	Large mammal	Pelvis	1	2
2247	2246	2246	2	SFB	Sheep/Goat	Metacarpus	1	3
2247	2246	2246	2	SFB	Bird	Long bone	1	0
2247	2246	2246	2	SFB	Sheep/Goat	Radius	1	2
2247	2246	2246	2	SFB	Sheep/Goat	Mandible	1	2
2247	2246	2246	2	SFB	Sheep/Goat	Mandible	1	2
2247	2246	2246	2	SFB	Sheep/Goat	Maxilla	1	1
2247	2246	2246	2	SFB	Red deer	Antler	1	2
2247	2246	2246	2	SFB	Medium mammal	Clavicle	1	1
2248	2246	2246	2	SFB	Sheep/Goat	Loose mand cheek tooth	1	1
2248	2246	2246	2	SFB	Large mammal	Scapula	1	1
2248	2246	2246	2	SFB	Cattle	Mandible	1	1
2248	2246	2246	2	SFB	Pig	Pelvis	1	1

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2248	2246	2246	2	SFB	Medium mammal	Metatarsus	1	1
2248	2246	2246	2	SFB	Large mammal	Long bone	1	1
2251	2246	2246	2	SFB	Large mammal	Skull	1	1
2251	2246	2246	2	SFB	Sheep/Goat	Mandible	1	1
2251	2246	2246	2	SFB	Medium mammal	Radius	1	1
2251	2246	2246	2	SFB	Sheep/Goat	Mandible	1	1
2251	2246	2246	2	SFB	Sheep/Goat	Maxilla	1	1
2251	2246	2246	2	SFB	Cattle	Mandible	1	1
2251	2246	2246	2	SFB	Sheep/Goat	Mandible	1	1
2254	2246	2246	2	SFB	Large mammal	Femur	1	1
2254	2246	2246	2	SFB	Sheep/Goat	Metatarsus	1	1
2254	2246	2246	2	SFB	Pig	Incisor	1	1
2254	2246	2246	2	SFB	Sheep/Goat	Radius	1	2
2277	2246	2246	2	skeleton	Sheep/Goat	Astragalus	1	2
2277	2246	2246	2	skeleton	Cattle	Metatarsus	1	2
2277	2246	2246	2	skeleton	Sheep/Goat	Loose mand cheek tooth	1	1
2288	2287	2287	5	ditch	Horse	Loose mand cheek tooth	1	1
2288	2287	2287	5	ditch	Sheep/Goat	Tibia	1	1
2290	2289	2289	5	ditch	Sheep/Goat	Mandible	1	1
2290	2289	2289	5	ditch	Bird	Long bone	2	1
2290	2289	2289	5	ditch	Cattle	PH1	1	1
2290	2289	2289	5	ditch	Pig	Humerus	1	1
2292	2291	2069	1	ditch	Sheep/Goat	Loose mandibular row	1	2
2292	2291	2069	1	ditch	Cattle	Loose mand cheek tooth	1	1
2292	2291	2069	1	ditch	Sheep/Goat	Loose mand cheek tooth	1	1
2292	2291	2069	1	ditch	Horse	PH1	1	2
2318	2317	2073	3	ditch	Cattle	Mandible	1	2
2318	2317	2073	3	ditch	Cattle	Loose mand cheek tooth	1	1
2318	2317	2073	3	ditch	Cattle	Scapula	1	2
2318	2317	2073	3	ditch	Cattle	Scapula	1	2
2318	2317	2073	3	ditch	Horse	Radius	1	2
2318	2317	2073	3	ditch	Cattle	Metacarpus	1	2
2318	2317	2073	3	ditch	Cattle	Metacarpus	1	2
2321	2320	2165	2	ditch	Horse	PH1	1	1
2321	2320	2165	2	ditch	Large mammal	Pelvis	1	2
2321	2320	2165	2	ditch	Pig	Incisor	4	1
2321	2320	2165	2	ditch	Pig	Scapula	1	2
2351	2350	2350	2	pit	Sheep/Goat	Mandible	1	2
2363	2362	2071	2	ditch	dog	PH1	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2363	2362	2071	2	ditch	Large mammal	Long bone	1	2
2363	2362	2071	2	ditch	Pig	Incisor	1	1
2363	2362	2071	2	ditch	Cattle	Metatarsus	1	2
2363	2362	2071	2	ditch	Large mammal	Pelvis	1	2
2365	2364	2364	1	post hole	Cattle	Metatarsus	1	2
2375	2374	2026	2	pit	Sheep/Goat	Loose mand cheek tooth	2	1
2396	2395	2395	5	ditch	Cattle	Metacarpus	1	2
2396	2395	2395	5	ditch	Cattle	Mandible	1	2
2396	2395	2395	5	ditch	Cattle	Pelvis	1	2
2398	2397	2350	2	pit	Cattle	Metapodial	1	3
2399	2397	2350	2	pit	Cattle	Skull	1	2
2399	2397	2350	2	pit	Cattle	Loose mand cheek tooth	1	1
2402	0	2007	4	layer	Sheep/Goat	Mandible	1	2
2404	0	2007	4	layer	Sheep/Goat	Mandible	1	1
2408	0	2007	4	layer	Horse	Ulna	1	2
2414	0	2007	4	layer	Sheep/Goat	Radius	1	1
2416	0	2007	4	layer	Cattle	Scapula	1	2
2417	0	2007	4	layer	Medium mammal	Femur	1	2
2418	0	2007	4	layer	Sheep/Goat	Loose max cheek tooth	1	1
2419	0	2007	4	layer	Sheep/Goat	Loose max cheek tooth	1	1
2419	0	2007	4	layer	Cattle	PH2	1	2
2419	0	2007	4	layer	Sheep/Goat	Metacarpus	1	1
2419	0	2007	4	layer	Large mammal	Skull	1	1
2419	0	2007	4	layer	Cattle	Metatarsus	1	1
2423	0	2007	4	layer	Sheep/Goat	Loose max cheek tooth	1	1
2423	0	2007	4	layer	Cattle	Metacarpus	1	2
2424	0	2007	4	layer	Pig	Loose mand cheek tooth	1	1
2424	0	2007	4	layer	Sheep/Goat	Tibia	1	1
2425	0	2007	4	layer	Large mammal	Humerus	1	3
2427	0	2007	4	layer	Medium mammal	Tibia	1	1
2427	0	2007	4	layer	Large mammal	Long bone	1	1
2429	0	2007	4	layer	Sheep/Goat	Metacarpus	1	2
2429	0	2007	4	layer	Cattle	Humerus	1	1
2429	0	2007	4	layer	Sheep/Goat	Loose mandibular row	1	1
2430	0	2007	4	layer	Sheep/Goat	Mandible	1	2
2430	0	2007	4	layer	Sheep/Goat	Calcaneus	1	2
2432	0	2007	4	layer	Sheep/Goat	Loose mand cheek tooth	1	1
2434	0	2007	4	layer	Cattle	Metapodial	1	2
2434	0	2007	4	layer	Cattle	Horncore	1	1

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2435	0	2007	4	layer	Sheep/Goat	Metacarpus	1	2
2437	0	2007	4	layer	Sheep/Goat	Radius	1	2
2444	0	2176	4	layer	Cattle	Calcaneus	1	2
2448	0	2176	4	layer	Medium mammal	Pelvis	1	2
2448	0	2176	4	layer	Large mammal	Sacrum	1	2
2451	0	2176	4	layer	Dog	Mandible	1	2
2451	0	2176	4	layer	Large mammal	Pelvis	1	2
2453	0	2176	4	layer	Sheep/Goat	Loose max cheek tooth	1	1
2456	0	2176	4	layer	Pig	Metapodial	1	2
2459	0	2176	4	layer	Large mammal	Femur	1	2
2459	0	2176	4	layer	Cattle	Mandible	1	2
2459	0	2176	4	layer	Cattle	Metatarsus	1	3
2459	0	2176	4	layer	Cattle	Mandible	1	2
2459	0	2176	4	layer	Large mammal	Tibia	1	1
2459	0	2176	4	layer	Sheep/Goat	Humerus	1	1
2459	0	2176	4	layer	Cattle	Loose mand cheek tooth	1	1
2460	0	2176	4	layer	Large mammal	Scapula	1	2
2460	0	2176	4	layer	bird	Long bone	1	1
2460	0	2176	4	layer	Cattle	Loose mand cheek tooth	1	2
2460	0	2176	4	layer	Cattle	Loose mand cheek tooth	2	1
2460	0	2176	4	layer	Cattle	Incisor	2	2
2460	0	2176	4	layer	Cattle	Mandible	1	3
2460	0	2176	4	layer	Cattle	Horncore	1	1
2460	0	2176	4	layer	Cattle	Metatarsus	1	2
2461	0	2176	4	layer	Cattle	Pelvis	1	2
2464	0	2188	4	layer	Sheep/Goat	Humerus	1	2
2464	0	2188	4	layer	Medium mammal	Tibia	1	2
2465	0	2188	4	layer	Medium mammal	Skull	1	1
2465	0	2188	4	layer	Cattle	Metacarpus	1	2
2465	0	2188	4	layer	Cattle	Radius	1	2
2467	0	2188	4	layer	Cattle	Loose max cheek tooth	1	2
2470	0	2188	4	layer	Sheep/Goat	Loose max cheek tooth	1	1
2472	0	2188	4	layer	Cattle	Loose mand cheek tooth	1	2
2475	0	2188	4	layer	Cattle	Metapodial	1	2
2475	0	2188	4	layer	Cattle	Radius	1	2
2502	2501	2344	1	pit	Cattle	Pelvis	1	2
2502	2501	2344	1	pit	Cattle	Metatarsus	1	2
2505	2504	2246	2	SFB	Cattle	Metacarpus	1	2
2505	2504	2246	2	SFB	Sheep/Goat	Mandible	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2505	2504	2246	2	SFB	Cattle	Mandible	1	2
2505	2504	2246	2	SFB	Sheep/Goat	Metapodial	1	2
2505	2504	2246	2	SFB	Medium mammal	Metacarpus	1	2
2505	2504	2246	2	SFB	Large mammal	Pelvis	1	2
2505	2504	2246	2	SFB	Sheep/Goat	Metapodial	1	2
2505	2504	2246	2	SFB	Sheep/Goat	Radius	1	2
2505	2504	2246	2	SFB	Large mammal	Skull	1	1
2505	2504	2246	2	SFB	Medium mammal	Radius	1	1
2505	2504	2246	2	SFB	Sheep/Goat	Mandible	1	2
2505	2504	2246	2	SFB	Sheep/Goat	Mandible	1	2
2505	2504	2246	2	SFB	Sheep/Goat	Maxilla	1	2
2505	2504	2246	2	SFB	Sheep/Goat	Loose max cheek tooth	1	1
2505	2504	2246	2	SFB	Cattle	Loose max cheek tooth	1	2
2505	2504	2246	2	SFB	Chicken	Tarsometatarsus	1	1
2505	2504	2246	2	SFB	Pig	Metapodial	1	1
2505	2504	2246	2	SFB	Pig	Loose mand cheek tooth	1	1
2505	2504	2246	2	SFB	Bird	Long bone	1	1
2507	2504	2246	2	SFB	Sheep/Goat	Loose mand cheek tooth	1	2
2507	2504	2246	2	SFB	Horse	Loose mand cheek tooth	1	2
2507	2504	2246	2	SFB	Sheep/Goat	Radius	1	2
2507	2504	2246	2	SFB	Medium mammal	Rib	1	2
2507	2504	2246	2	SFB	Sheep/Goat	Maxilla	1	2
2507	2504	2246	2	SFB	Large mammal	Skull	1	1
2507	2504	2246	2	SFB	Cattle	Metacarpus	1	2
2507	2504	2246	2	SFB	Cattle	Metacarpus	1	2
2507	2504	2246	2	SFB	Cattle	Metacarpus	1	2
2507	2504	2246	2	SFB	Sheep/Goat	Mandible	1	2
2507	2504	2246	2	SFB	Sheep/Goat	Mandible	1	1
2507	2504	2246	2	SFB	Cattle	Mandible	1	1
2507	2504	2246	2	SFB	Horse	Radius	1	1
2507	2504	2246	2	SFB	Pig	Maxilla	1	2
2507	2504	2246	2	SFB	Sheep/Goat	Pelvis	1	2
2508	2504	2246	2	SFB	Cattle	Loose maxillary row	2	1
2508	2504	2246	2	SFB	Sheep/Goat	Mandible	1	1
2508	2504	2246	2	SFB	Sheep/Goat	Mandible	1	1
2508	2504	2246	2	SFB	Sheep/Goat	Mandible	1	1
2508	2504	2246	2	SFB	Large mammal	Skull	1	1
2509	2504	2246	2	SFB	Sheep/Goat	Radius	1	2
2509	2504	2246	2	SFB	Sheep/Goat	Mandible	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2509	2504	2246	2	SFB	Sheep/Goat	Mandible	1	2
2509	2504	2246	2	SFB	Sheep/Goat	Metacarpus	1	0
2509	2504	2246	2	SFB	Sheep/Goat	Metatarsus	1	1
2509	2504	2246	2	SFB	Sheep/Goat	Loose mand cheek tooth	1	1
2511	2510	2322	3	post hole	Medium mammal	Metacarpus	1	1
2527	2526	2350	2	pit	Cattle	Ulna	1	1
2527	2526	2350	2	pit	Cattle	Mandible	1	2
2527	2526	2350	2	pit	Cattle	Mandible	1	2
2527	2526	2350	2	pit	Cattle	Mandible	1	1
2527	2526	2350	2	pit	Cattle	Metacarpus	1	1
2527	2526	2350	2	pit	Cattle	Loose mand cheek tooth	1	1
2527	2526	2350	2	pit	Cattle	Loose max cheek tooth	1	1
2527	2526	2350	2	pit	Sheep/Goat	Loose mand cheek tooth	3	1
2527	2526	2350	2	pit	Cattle	Horncore	1	2
2527	2526	2350	2	pit	Cattle	Mandible	1	1
2537	2535	2196	3	pit	Sheep/Goat	Maxilla	1	2
2537	2535	2196	3	pit	Medium mammal	Humerus	1	2
2563	2562	2562	3	ditch	Cattle	Radius	1	2
2563	2562	2562	3	ditch	Medium mammal	Scapula	1	4
2578	2577	2069	1	ditch	Horse	Scapula	1	2
2578	2577	2069	1	ditch	Sheep/Goat	Loose mand cheek tooth	1	1
2580	2579	2538	2	pit	Sheep/Goat	Loose mand cheek tooth	2	1
2580	2579	2538	2	pit	Sheep/Goat	Loose max cheek tooth	1	1
2580	2579	2538	2	pit	Sheep/Goat	Mandible	1	2
2580	2579	2538	2	pit	Medium mammal	Metatarsus	1	1
2580	2579	2538	2	pit	Medium mammal	Pelvis	1	2
2580	2579	2538	2	pit	small mammal	Femur	1	1
2580	2579	2538	2	pit	dog	Loose mand cheek tooth	1	1
2585	2583	2383	2	pit	Sheep/Goat	Metacarpus	1	2
2585	2583	2383	2	pit	Pig	Loose mand cheek tooth	2	2
2585	2583	2383	2	pit	Cattle	Metapodial	1	3
2585	2583	2383	2	pit	Medium mammal	Metatarsus	1	2
2586	2583	2383	2	pit	Sheep/Goat	Mandible	1	2
2586	2583	2383	2	pit	Large mammal	Long bone	1	2
2586	2583	2383	2	pit	Sheep/Goat	Metacarpus	1	1
2586	2583	2383	2	pit	Cattle	Metacarpus	1	2
2591	2588	2385	3	pit	Cattle	Metatarsus	1	2
2593	2592	2138	1	pit	Horse	Humerus	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2595	2594	2138	1	pit	Large mammal	Skull	1	1
2596	0	2385	3	pit	Horse	Tibia	1	1
2599	2597	2385	3	pit	Large mammal	Scapula	1	2
2599	2597	2385	3	pit	Medium mammal	Metatarsus	1	2
2600	2597	2385	3	pit	Large mammal	Skull	1	1
2600	2597	2385	3	pit	Medium mammal	Radius	1	2
2600	2597	2385	3	pit	Sheep/Goat	Mandible	1	1
2600	2597	2385	3	pit	Cattle	Astragalus	1	2
2602	2601	2071	2	ditch	Large mammal	Tibia	1	2
2602	2601	2071	2	ditch	Pig	Mandible	1	2
2602	2601	2071	2	ditch	Cattle	Astragalus	1	2
2602	2601	2071	2	ditch	Medium mammal	Metatarsus	1	1
2602	2601	2071	2	ditch	Medium mammal	Long bone	2	2
2606	2603	2603	1	ditch	Medium mammal	Tibia	1	3
2606	2603	2603	1	ditch	Cattle	Mandible	1	2
2612	2609	2012	2	ditch	Pig	Mandible	1	2
2612	2609	2012	2	ditch	Horse	Scapula	1	3
2612	2609	2012	2	ditch	Cattle	Scapula	1	2
2636	2635	2530	1	post hole	Cattle	Loose mand cheek tooth	1	1
2650	2649	2071	2	ditch	Cattle	Loose mand cheek tooth	1	1
2650	2649	2071	2	ditch	Sheep	Metapodial	1	1
2656	2655	2743	1	ditch	Cattle	Loose mand cheek tooth	1	1
2662	2579	2538	2	pit	Cattle	Metacarpus	1	1
2662	2579	2538	2	pit	Cattle	Horncore	1	2
2662	2579	2538	2	pit	Cattle	Metatarsus	1	1
2662	2579	2538	2	pit	Medium mammal	Radius	2	1
2662	2579	2538	2	pit	Sheep/Goat	Mandible	1	2
2662	2579	2538	2	pit	dog	Femur	1	1
2662	2579	2538	2	pit	Pig	Loose mand cheek tooth	1	1
2663	2579	2538	2	pit	Sheep/Goat	Mandible	1	1
2663	2579	2538	2	pit	Cattle	Humerus	1	2
2664	2579	2538	2	pit	Cattle	Metapodial	1	2
2664	2579	2538	2	pit	Sheep/Goat	Metacarpus	1	2
2664	2579	2538	2	pit	Cattle	Loose max cheek tooth	1	1
2664	2579	2538	2	pit	Pig	Metapodial	1	1
2665	2579	2538	2	pit	Cattle	Metacarpus	1	2
2665	2579	2538	2	pit	Cattle	Metatarsus	1	2
2669	2668	2538	2	pit	Sheep/Goat	Radius	1	3
2669	2668	2538	2	pit	Medium mammal	Fibula	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2669	2668	2538	2	pit	Sheep/Goat	Metatarsus	1	2
2672	2726	2562	3	ditch	Sheep/Goat	Mandible	1	2
2672	2726	2562	3	ditch	Sheep/Goat	Metatarsus	1	3
2672	2726	2562	3	ditch	Sheep/Goat	Metacarpus	1	2
2672	2726	2562	3	ditch	Sheep/Goat	Metatarsus	1	1
2672	2726	2562	3	ditch	Sheep	Radius	1	3
2672	2726	2562	3	ditch	Sheep/Goat	Radius	1	3
2672	2726	2562	3	ditch	Sheep/Goat	Humerus	1	3
2672	2726	2562	3	ditch	Pig	Incisor	1	1
2672	2726	2562	3	ditch	Pig	Maxilla	1	1
2672	2726	2562	3	ditch	Cattle	Metacarpus	1	2
2672	2726	2562	3	ditch	Sheep/Goat	Metatarsus	1	1
2672	2726	2562	3	ditch	Cattle	Mandible	1	2
2673	2726	2562	3	ditch	Cattle	Humerus	1	3
2673	2726	2562	3	ditch	Cattle	Mandible	1	2
2673	2726	2562	3	ditch	Sheep/Goat	Metatarsus	1	2
2673	2726	2562	3	ditch	Sheep/Goat	Metatarsus	1	2
2673	2726	2562	3	ditch	Sheep/Goat	Metatarsus	1	1
2673	2726	2562	3	ditch	Sheep/Goat	Metacarpus	1	1
2673	2726	2562	3	ditch	Large mammal	Rib	1	2
2673	2726	2562	3	ditch	Large mammal	Rib	1	2
2673	2726	2562	3	ditch	Large mammal	Pelvis	1	2
2673	2726	2562	3	ditch	Cattle	Tibia	1	2
2673	2726	2562	3	ditch	Sheep/Goat	Tibia	1	1
2673	2726	2562	3	ditch	Sheep/Goat	Mandible	1	2
2673	2726	2562	3	ditch	Sheep/Goat	Mandible	1	1
2673	2726	2562	3	ditch	Cattle	Femur	1	2
2673	2726	2562	3	ditch	Cattle	Astragalus	1	1
2673	2726	2562	3	ditch	dog	Radius	1	2
2673	2726	2562	3	ditch	Large mammal	Radius	1	3
2673	2726	2562	3	ditch	Sheep/Goat	Metacarpus	1	2
2673	2726	2562	3	ditch	Cattle	Tibia	1	2
2674	2725	2560	5	pit	Sheep/Goat	Loose mand cheek tooth	1	1
2674	2725	2560	5	pit	Cattle	Metatarsus	1	1
2674	2725	2560	5	pit	Medium mammal	Radius	1	1
2674	2725	2560	5	pit	bird	Furcula	1	1
2674	2725	2560	5	pit	Cattle	Mandible	1	2
2674	2725	2560	5	pit	Cattle	Tibia	1	2
2674	2725	2560	5	pit	Cattle	Metapodial	1	2
2674	2725	2560	5	pit	Sheep/Goat	Mandible	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2674	2725	2560	5	pit	Sheep/Goat	Mandible	1	1
2675	2671	2081	2	ditch	Cattle	PH1	1	2
2675	2671	2081	2	ditch	Cattle	Axis	1	2
2675	2671	2081	2	ditch	Sheep/Goat	Mandible	1	2
2676	2671	2081	2	ditch	dog	Radius	1	1
2676	2671	2081	2	ditch	Medium mammal	Radius	1	2
2676	2671	2081	2	ditch	Sheep/Goat	Mandible	1	2
2676	2671	2081	2	ditch	Large mammal	Femur	1	2
2679	2677	2057	2	pit	Sheep/Goat	Humerus	1	3
2679	2677	2057	2	pit	Cattle	Skull	1	2
2679	2677	2057	2	pit	Sheep/Goat	Radius	1	1
2679	2677	2057	2	pit	Sheep/Goat	Tibia	1	2
2679	2677	2057	2	pit	Sheep/Goat	Mandible	1	2
2680	2677	2057	2	pit	Sheep/Goat	Mandible	1	2
2680	2677	2057	2	pit	Sheep/Goat	Metacarpus	1	1
2680	2677	2057	2	pit	Medium mammal	Pelvis	1	1
2680	2677	2057	2	pit	Pig	Incisor	1	1
2680	2677	2057	2	pit	Cattle	Horncore	1	2
2681	2677	2057	2	pit	Sheep/Goat	Mandible	1	1
2681	2677	2057	2	pit	bird	Long bone	1	1
2687				layer	Sheep/Goat	Pelvis	1	1
2687				layer	Sheep/Goat	Mandible	1	2
2687				layer	Sheep/Goat	Mandible	1	2
2687				layer	Cattle	Mandible	1	3
2687		2687	1	SFB	Sheep/Goat	Rib	1	1
2687		2687	1	SFB	Large mammal	Skull	1	1
2687		2687	1	SFB	Sheep/Goat	Radius	1	1
2688	2686	2686	1	SFB	Large mammal	Long bone	1	1
2688	2686	2686	1	SFB	Large mammal	Long bone	9	1
2688	2686	2686	1	SFB	Sheep/Goat	Mandible	1	1
2688	2686	2686	1	SFB	Sheep/Goat	Astragalus	1	1
2688	2686	2686	1	SFB	Cattle	Metapodial	1	1
2688	2686	2686	1	SFB	Sheep/Goat	Tibia	1	1
2688	2686	2686	1	SFB	Cattle	Horncore	1	1
2688	2686	2686	1	SFB	Sheep/Goat	Mandible	1	1
2688	2686	2686	1	SFB	Sheep/Goat	Metatarsus	1	1
2688	2686	2686	1	SFB	Medium mammal	Long bone	3	1
2688	2686	2686	1	SFB	Sheep/Goat	Mandible	1	1
2688	2686	2686	1	SFB	Sheep/Goat	Loose mand cheek tooth	1	1
2688	2686	2686	1	SFB	Sheep/Goat	Metatarsus	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2688	2686	2686	1	SFB	Sheep/Goat	Metacarpus	1	1
2688	2686	2686	1	SFB	Sheep/Goat	Mandible	1	1
2690	2689	2057	2	pit	Cattle	Mandible	1	1
2690	2689	2057	2	pit	Cattle	Loose maxillary row	1	1
2690	2689	2057	2	pit	Cattle	Radius	1	3
2701	2700	2057	2	pit	Horse	PH1	1	2
2701	2700	2057	2	pit	Medium mammal	Tibia	1	2
2701	2700	2057	2	pit	Sheep/Goat	Metatarsus	1	2
2701	2700	2057	2	pit	Sheep/Goat	Metatarsus	1	3
2701	2700	2057	2	pit	Sheep/Goat	Loose mand cheek tooth	2	1
2701	2700	2057	2	pit	Sheep/Goat	Metacarpus	1	1
2701	2700	2057	2	pit	Pig	Incisor	1	1
2701	2700	2057	2	pit	Horse	Ulna	1	2
2702	2700	2057	2	pit	Pig	Mandible	1	1
2702	2700	2057	2	pit	Large mammal	Long bone	1	1
2702	2700	2057	2	pit	Medium mammal	Tibia	1	1
2702	2700	2057	2	pit	Cattle	Metacarpus	1	2
2702	2700	2057	2	pit	Sheep/Goat	Metapodial	1	2
2703	2700	2057	2	pit	Cattle	Metacarpus	1	2
2703	2700	2057	2	pit	Sheep/Goat	Humerus	1	1
2716	2715	2057	2	pit	Horse	Loose max cheek tooth	1	2
2716	2715	2057	2	pit	Cattle	Metacarpus	1	1
2716	2715	2057	2	pit	Cattle	Metapodial	1	4
2716	2715	2057	2	pit	Cattle	Loose mand cheek tooth	1	1
2716	2715	2057	2	pit	Cattle	PH1	1	3
2722	2721	2073	3	ditch	Cattle	PH1	1	2
2722	2721	2073	3	ditch	Cattle	Maxilla	1	2
2722	2721	2073	3	ditch	Cattle	Radius	1	3
2722	2721	2073	3	ditch	Cattle	Metacarpus	1	2
2729	2727	2560	5	pit	Cattle	Metapodial	1	2
2729	2727	2560	5	pit	Cattle	Mandible	1	2
2729	2727	2560	5	pit	Cattle	Mandible	1	2
2729	2727	2560	5	pit	Sheep/Goat	Loose mand cheek tooth	1	1
2729	2727	2560	5	pit	Pig	Mandible	1	1
2730	2671	2081	2	ditch	Sheep/Goat	Humerus	1	2
2740	2739	2739	2	pit	Cattle	PH1	1	2
2740	2739	2739	2	pit	Cattle	Skull	1	2
2747	2745	2057	2	pit	Medium mammal	Femur	1	1
2747	2745	2057	2	pit	Sheep/Goat	Metatarsus	1	1
2747	2745	2057	2	pit	Sheep/Goat	Metacarpus	1	1

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2764	2763	2071	2	ditch	Cattle	Loose max cheek tooth	1	1
2764	2763	2071	2	ditch	Large mammal	Humerus	1	3
2764	2763	2071	2	ditch	Sheep/Goat	Mandible	1	2
2764	2763	2071	2	ditch	Medium mammal	Pelvis	1	2
2764	2763	2071	2	ditch	Cattle	Humerus	1	2
2766	0	2079	1	pit	Cattle	Humerus	1	4
2795	2794	2138	1	pit	Cattle	Tibia	1	2
2795	2794	2138	1	pit	Cattle	Metacarpus	1	2
2816	2813	2196	3	pit	Medium mammal	Pelvis	1	1
2816	2813	2196	3	pit	bird	Tibia	1	1
2816	2813	2196	3	pit	Sheep/Goat	Mandible	1	1
2816	2813	2196	3	pit	Cattle	Tibia	1	3
2816	2813	2196	3	pit	Cattle	Scapula	1	2
2818	2817	2344	1	pit	Horse	Metacarpus	1	2
2822	2821	2615	3	ditch	Sheep/Goat	Loose mand cheek tooth	1	2
2830	2686	2686	1	SFB	dog	Humerus	1	2
2830	2686	2686	1	SFB	Pig	Humerus	1	1
2830	2686	2686	1	SFB	Pig	Humerus	1	2
2830	2686	2686	1	SFB	Sheep/Goat	Loose max cheek tooth	1	1
2830	2686	2686	1	SFB	Cattle	Metatarsus	1	2
2830	2686	2686	1	SFB	Sheep/Goat	Mandible	1	1
2830	2686	2686	1	SFB	Medium mammal	Long bone	3	1
2830	2686	2686	1	SFB	Large mammal	Rib	1	1
2832	2686	2686	1	SFB	Medium mammal	Tibia	1	2
2832	2686	2686	1	SFB	Sheep/Goat	Mandible	1	1
2832	2686	2686	1	SFB	Medium mammal	Long bone	2	1
2833	2686	2686	1	SFB	Cattle	Humerus	1	2
2833	2686	2686	1	SFB	Large mammal	Scapula	1	2
2833	2686	2686	1	SFB	Large mammal	Long bone	1	1
2837	2836	2686	2		Medium mammal	Metatarsus	1	2
2837	2836	2686	2		bird	Furcula	1	1
2837	2836	2686	2		Cattle	Humerus	1	1
2837	2836	2686	2		Large mammal	Skull	1	1
2837	2836	2686	2		Cattle	Scapula	1	2
2837	2836	2686	2		Large mammal	Rib	1	2
2837	2836	2686	2		Sheep/Goat	Mandible	1	2
2837	2836	2686	2		Sheep/Goat	Mandible	1	2
2837	2836	2686	2		Pig	Loose mand cheek tooth	1	2
2837	2836	2686	2		Sheep/Goat	Loose mand cheek tooth	1	1

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2837	2836	2686	2		Pig	Mandible	1	2
2837	2836	2686	2		Sheep/Goat	Radius	1	2
2837	2836	2686	2		Sheep/Goat	Tibia	1	1
2837	2836	2686	2		Sheep/Goat	Humerus	1	2
2837	2836	2686	2		Sheep/Goat	Mandible	1	2
2837	2836	2686	2		Cattle	Metatarsus	1	2
2837	2836	2686	2		Horse	PH3	1	1
2837	2836	2686	2		Cattle	PH1	1	3
2837	2836	2686	2		Cattle	Metatarsus	1	2
2837	2836	2686	2		Cattle	Metacarpus	1	2
2837	2836	2686	2		Sheep/Goat	Metacarpus	1	2
2837	2836	2686	2		Cattle	Metatarsus	1	2
2838	3159	2287	5	ditch	Sheep/Goat	Radius	1	2
2838	3159	2287	5	ditch	Cattle	Loose mand cheek tooth	1	2
2838	3159	2287	5	ditch	Sheep/Goat	Mandible	1	2
2838	3159	2287	5	ditch	Pig	Metapodial	1	2
2838	3159	2287	5	ditch	Sheep/Goat	Mandible	1	2
2838	3159	2287	5	ditch	Medium mammal	Skull	1	1
2838	3159	2287	5	ditch	Cattle	Skull	1	2
2838	3159	2287	5	ditch	Cattle	Mandible	1	2
2839	2836	2686	2		Sheep/Goat	Mandible	1	2
2839	2836	2686	2		Cattle	Maxilla	1	2
2839	2836	2686	2		Cattle	Skull	1	1
2839	2836	2686	2		Cattle	Mandible	1	2
2839	2836	2686	2		Cattle	Metatarsus	1	1
2839	2836	2686	2		Sheep/Goat	Mandible	1	2
2839	2836	2686	2		Sheep/Goat	Mandible	1	2
2839	2836	2686	2		Sheep/Goat	Maxilla	1	2
2839	2836	2686	2		Cattle	Scapula	1	2
2839	2836	2686	2		Sheep/Goat	Mandible	1	2
2839	2836	2686	2		Sheep/Goat	Metatarsus	1	1
2842	2836	2686	2		Cattle	Humerus	1	2
2842	2836	2686	2		Cattle	Metatarsus	1	2
2842	2836	2686	2		Sheep/Goat	Metacarpus	1	1
2842	2836	2686	2		Sheep/Goat	Mandible	1	2
2842	2836	2686	2		Chicken	Ulna	1	0
2842	2836	2686	2		Chicken	Radius	1	0
2842	2836	2686	2		Cattle	Ulna	1	2
2842	2836	2686	2		Cattle	Calcaneus	1	3
2842	2836	2686	2		Chicken	Humerus	1	0

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2842	2836	2686	2		Sheep/Goat	Pelvis	1	1
2843	2836	2686	2		Cattle	Loose mand cheek tooth	1	2
2844	2836	2686	2		Cattle	Mandible	1	2
2845	3146	2686	2		Cattle	Mandible	1	2
2845	3146	2686	2		Sheep/Goat	Tibia	1	2
2845	3146	2686	2		Pig	Scapula	1	3
2845	3146	2686	2		Cattle	Humerus	1	3
2905	2904	2904	2	pit	Sheep/Goat	Mandible	1	1
2938	0	2930	2	post hole	Sheep/Goat	Radius	1	3
2938	0	2930	2	post hole	Horse	lateral Metapodial	1	3
2938	0	2930	2	post hole	Cattle	Metatarsus	1	2
2938	0	2930	2	post hole	Cattle	PH1	1	3
2968		0	9		Cattle	Maxilla	1	2
2968		0	9	layer	Cattle	Metatarsus	1	2
2968		0	9	layer	Red Deer	Ulna	1	2
2968		0	9	layer	Sheep/Goat	Metacarpus	1	2
2968		0	9	layer	Sheep/Goat	Loose mand cheek tooth	2	1
2972	3247	2168	1	pit	Pig	Loose mand cheek tooth	1	1
2972	3247	2168	1	pit	Medium mammal	Metapodial	1	1
2972	3247	2168	1	pit	Cattle	Metacarpus	1	3
2972	3247	2168	1	pit	Cattle	Metacarpus	1	2
2972	3247	2168	1	pit	Cattle	Metacarpus	1	3
2972	3247	2168	1	pit	Sheep/Goat	Metapodial	1	3
2972	3247	2168	1	pit	Cattle	Mandible	1	2
2972	3247	2168	1	pit	Sheep/Goat	Mandible	1	2
2972	3247	2168	1	pit	Sheep/Goat	Loose max cheek tooth	2	1
2972	3247	2168	1	pit	Cattle	Ulna	1	2
2972	3247	2168	1	pit	Cattle	Metacarpus	1	2
2972	3247	2168	1	pit	Sheep/Goat	Loose mand cheek tooth	1	1
2972	3247	2168	1	pit	Sheep/Goat	Radius	1	2
2972	3247	2168	1	pit	Cattle	PH1	1	3
2972	3247	2168	1	pit	Sheep/Goat	Metapodial	2	1
2972	3247	2168	1	pit	Sheep/Goat	Mandible	1	1
2972	3247	2168	1	pit	Sheep/Goat	Mandible	1	1
2973	3247	2168	1	pit	Cattle	Pelvis	1	2
2973	3247	2168	1	pit	Sheep/Goat	Mandible	1	2
2973	3247	2168	1	pit	Sheep/Goat	Mandible	1	2
2974	3247	2168	1	pit	Cattle	Scapula	1	2
2974	3247	2168	1	pit	Sheep/Goat	Mandible	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
2974	3247	2168	1	pit	Sheep/Goat	Humerus	1	2
2974	3247	2168	1	pit	Sheep/Goat	Mandible	1	2
2974	3247	2168	1	pit	Medium mammal	Rib	1	1
2975	3247	2168	1	pit	Sheep/Goat	Mandible	1	2
2976	3247	2168	1	pit	Medium mammal	Rib	1	1
2976	3247	2168	1	pit	Cattle	Ulna	1	2
2978	2977	2825	3	pit	Sheep/Goat	Mandible	1	2
2978	2977	2825	3	pit	Sheep/Goat	Ulna	1	1
2982	2981	3136	2	ditch	Sheep/Goat	Loose mand cheek tooth	1	2
3017	3167	2168	1	structure	Sheep/Goat	Mandible	1	2
3017	3167	2168	1	structure	Medium mammal	Metacarpus	1	1
3017	3167	2168	1	structure	Cattle	Metacarpus	1	1
3017	3167	2168	1	structure	Sheep/Goat	Loose mand cheek tooth	2	1
3028	3027	3027	2	ditch	Cattle	Pelvis	1	1
3028	3027	3027	2	ditch	Medium mammal	Radius	1	2
3028	3027	3027	2	ditch	Sheep/Goat	Pelvis	1	2
3041	3040	2979	1	post hole	Cattle	Mandible	1	1
3049	3048	2395	5	ditch	Horse	Femur	1	1
3049	3048	2395	5	ditch	Cattle	Maxilla	1	2
3049	3048	2395	5	ditch	Cattle	Loose mand cheek tooth	1	1
3049	3048	2395	5	ditch	Medium mammal	Metapodial	1	2
3053	3052	2395	5	ditch	Cattle	Metacarpus	1	3
3054	3274	3093	3	pit	Large mammal	Long bone	1	2
3054	3274	3093	3	pit	Sheep/Goat	Metacarpus	1	2
3054	3274	3093	3	pit	Cattle	Metatarsus	1	2
3054	3274	3093	3	pit	Cattle	Scapula	1	2
3054	3274	3093	3	pit	Sheep/Goat	Mandible	1	1
3054	3274	3093	3	pit	Sheep/Goat	Maxilla	1	2
3054	3274	3093	3	pit	Sheep/Goat	Tibia	1	1
3054	3274	3093	3	pit	Large mammal	Calcaneus	1	2
3055	3247	2168	1	pit	Sheep/Goat	Maxilla	1	2
3055	3247	2168	1	pit	Roe deer	Metatarsus	1	1
3055	3247	2168	1	pit	Large mammal	Long bone	2	1
3055	3247	2168	1	pit	Cattle	Humerus	1	2
3056	3247	2168	1	pit	Sheep/Goat	Mandible	1	2
3056	3247	2168	1	pit	Sheep/Goat	Radius	1	3
3056	3247	2168	1	pit	Medium mammal	Metatarsus	1	2
3056	3247	2168	1	pit	Large mammal	Long bone	1	1
3056	3247	2168	1	pit	Medium mammal	Rib	1	1
3056	3247	2168	1	pit	Medium mammal	Long bone	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
3056	3247	2168	1	pit	Sheep/Goat	Maxilla	1	2
3056	3247	2168	1	pit	Sheep/Goat	Mandible	1	2
3056	3247	2168	1	pit	Sheep/Goat	Loose mand cheek tooth	1	2
3056	3247	2168	1	pit	Cattle	Ulna	1	2
3056	3247	2168	1	pit	Sheep/Goat	Mandible	1	2
3056	3247	2168	1	pit	Sheep/Goat	Mandible	1	2
3056	3247	2168	1	pit	Sheep/Goat	Mandible	1	2
3056	3247	2168	1	pit	Pig	Pelvis	1	2
3056	3247	2168	1	pit	Pig	Mandible	1	2
3056	3247	2168	1	pit	Sheep/Goat	Metatarsus	1	2
3059	3247	2168	1	pit	Sheep/Goat	Mandible	1	1
3059	3247	2168	1	pit	Medium mammal	Femur	1	1
3059	3247	2168	1	pit	Sheep/Goat	Radius	1	2
3066	3062	2168	1	pit	Medium mammal	Scapula	1	1
3066	3062	2168	1	pit	Medium mammal	Tibia	1	2
3069	3067	2165	2	ditch	Cattle	Horncore	1	2
3069	3067	2165	2	ditch	Cattle	Mandible	1	1
3069	3067	2165	2	ditch	Large mammal	Pelvis	1	2
3069	3067	2165	2	ditch	Cattle	Metapodial	1	2
3070	3067	2165	2	ditch	Cattle	Astragalus	1	2
3073	3071	2165	2	ditch	Cattle	Mandible	1	1
3075	3071	2165	2	ditch	Pig	Mandible	1	2
3075	3071	2165	2	ditch	Cattle	Mandible	1	1
3075	3071	2165	2	ditch	Sheep/Goat	Mandible	1	1
3075	3071	2165	2	ditch	Sheep/Goat	Humerus	1	1
3075	3071	2165	2	ditch	Medium mammal	Metatarsus	1	1
3075	3071	2165	2	ditch	Bird	Ulna	1	1
3075	3071	2165	2	ditch	Sheep/Goat	Pelvis	1	1
3075	3071	2165	2	ditch	Large mammal	Femur	1	1
3075	3071	2165	2	ditch	Pig	Humerus	1	3
3075	3071	2165	2	ditch	Sheep/Goat	Humerus	1	1
3080	3251	3093	3	pit	Cattle	Mandible	1	2
3080	3251	3093	3	pit	Cattle	Metatarsus	1	2
3080	3251	3093	3	pit	Cattle	Pelvis	1	1
3080	3251	3093	3	pit	Cattle	Loose mand cheek tooth	1	1
3080	3251	3093	3	pit	Cattle	Pelvis	1	2
3080	3251	3093	3	pit	Cattle	Pelvis	1	1
3080	3251	3093	3	pit	Cattle	Maxilla	1	1
3080	3251	3093	3	pit	Cattle	PH2	1	1
3080	3251	3093	3	pit	Sheep/Goat	Tibia	1	1

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
3080	3251	3093	3	pit	Cattle	Metatarsus	1	1
3080	3251	3093	3	pit	Cattle	Metacarpus	1	3
3080	3251	3093	3	pit	Cattle	Metacarpus	1	1
3080	3251	3093	3	pit	Pig	Metapodial	1	2
3080	3251	3093	3	pit	Sheep/Goat	Mandible	1	1
3080	3251	3093	3	pit	Cattle	Metacarpus	1	1
3080	3251	3093	3	pit	Cattle	PH1	1	2
3080	3251	3093	3	pit	Large mammal	Rib	1	1
3080	3251	3093	3	pit	Cattle	Tibia	1	2
3080	3251	3093	3	pit	Sheep/Goat	Metapodial	1	1
3080	3251	3093	3	pit	Horse	Loose mand cheek tooth	2	2
3080	3251	3093	3	pit	Large mammal	Rib	1	1
3080	3251	3093	3	pit	Cattle	Calcaneus	1	1
3080	3251	3093	3	pit	Sheep/Goat	Metacarpus	1	1
3080	3251	3093	3	pit	Cattle	Pelvis	1	2
3080	3251	3093	3	pit	Medium mammal	Pelvis	1	2
3080	3251	3093	3	pit	Cattle	Horncore	1	2
3080	3251	3093	3	pit	Large mammal	Femur	1	1
3080	3251	3093	3	pit	Cattle	Pelvis	1	2
3080	3251	3093	3	pit	Cattle	Pelvis	1	2
3080	3251	3093	3	pit	Cattle	Pelvis	1	2
3080	3251	3093	3	pit	Cattle	Pelvis	1	2
3080	3251	3093	3	pit	Cattle	Pelvis	1	2
3080	3251	3093	3	pit	Sheep/Goat	Metacarpus	1	2
3080	3251	3093	3	pit	Cattle	Metatarsus	1	1
3081	3251	3093	3	pit	Large mammal	Scapula	1	2
3081	3251	3093	3	pit	Sheep/Goat	Humerus	1	1
3081	3251	3093	3	pit	Large mammal	lateral Metapodial	1	3
3081	3251	3093	3	pit	Large mammal	Humerus	1	2
3081	3251	3093	3	pit	Medium mammal	Humerus	1	3
3081	3251	3093	3	pit	Sheep/Goat	Mandible	1	2
3081	3251	3093	3	pit	Large mammal	Rib	1	2
3081	3251	3093	3	pit	Sheep/Goat	Mandible	1	2
3084	3258	3093	3	midden	Roe deer	Metatarsus	1	1
3084	3258	3093	3	midden	Sheep/Goat	Mandible	1	2
3084	3258	3093	3	midden	Sheep/Goat	Mandible	1	1
3084	3258	3093	3	midden	Cattle	PH3	1	1
3084	3258	3093	3	midden	Sheep/Goat	Tibia	1	1
3084	3258	3093	3	midden	Pig	Metapodial	1	2
3084	3258	3093	3	midden	Large mammal	Mandible	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
3084	3258	3093	3	midden	Sheep/Goat	Loose max cheek tooth	1	1
3084	3258	3093	3	midden	Sheep/Goat	Loose mandibular row	2	1
3084	3258	3093	3	midden	Cattle	Calcaneus	1	3
3084	3258	3093	3	midden	Cattle	Metacarpus	1	1
3084	3258	3093	3	midden	Large mammal	Mandible	1	1
3084	3258	3093	3	midden	Large mammal	Pelvis	1	1
3084	3258	3093	3	midden	Cattle	Metapodial	1	1
3085	3258	3093	3	midden deposit	Large mammal	Long bone	1	1
3085	3258	3093	3	in situ burning	Cattle	Loose mand cheek tooth	1	1
3085	3258	3093	3	midden deposit	Cattle	Metacarpus	1	2
3085	3258	3093	3	midden deposit	Medium mammal	Tibia	1	2
3086	3258	3093	3	midden deposit	Sheep/Goat	Radius	1	2
3086	3258	3093	3	midden deposit	Bird	Radius	1	1
3086	3258	3093	3	midden deposit	Cattle	PH1	1	1
3086	3258	3093	3	midden deposit	Cattle	PH1	1	1
3086	3258	3093	3	midden deposit	Cattle	Metatarsus	1	2
3086	3258	3093	3	midden deposit	Dog	Mandible	1	1
3086	3258	3093	3	midden deposit	Sheep/Goat	Humerus	1	2
3086	3258	3093	3	midden deposit	Pig	Loose mand cheek tooth	1	2
3086	3258	3093	3	midden deposit	Sheep/Goat	Mandible	1	2
3086	3258	3093	3	midden deposit	Cattle	Maxilla	1	2
3086	3258	3093	3	midden deposit	Cattle	Tibia	1	2
3086	3258	3093	3	midden deposit	Large mammal	Skull	1	2
3086	3258	3093	3	midden deposit	Cattle	Mandible	1	1
3086	3258	3093	3	midden deposit	Cattle	PH2	1	2
3086	3258	3093	3	midden deposit	Cattle	Metacarpus	1	1
3086	3258	3093	3	midden deposit	Cattle	Metapodial	1	2
3087	3258	3093	3	midden deposit	Medium mammal	Femur	1	1
3087	3258	3093	3	midden deposit	Sheep/Goat	Mandible	1	1
3087	3258	3093	3	midden deposit	Large mammal	Femur	1	1
3087	3258	3093	3	midden deposit	Horse	PH1	1	4
3087	3258	3093	3	midden deposit	Sheep/Goat	Mandible	1	2
3087	3258	3093	3	midden deposit	Sheep/Goat	Mandible	1	1

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
3087	3258	3093	3	midden deposit	Sheep/Goat	Mandible	1	2
3087	3258	3093	3	midden deposit	Sheep/Goat	Loose mand cheek tooth	3	1
3087	3258	3093	3	midden deposit	Dog	Ulna	1	1
3087	3258	3093	3	midden deposit	Cattle	Horncore	1	2
3087	3258	3093	3	midden deposit	Medium mammal	Metacarpus	1	1
3087	3258	3093	3	midden deposit	Medium mammal	Metatarsus	1	2
3087	3258	3093	3	midden deposit	Cattle	Scapula	1	2
3090	3258	3093	3	in situ burning	Cattle	Radius	1	2
3090	3258	3093	3	in situ burning	Cattle	Tibia	1	2
3090	3258	3093	3	in situ burning	Cattle	Scapula	1	1
3090	3258	3093	3	in situ burning	Sheep/Goat	Radius	1	1
3090	3258	3093	3	in situ burning	Dog	Radius	1	2
3090	3258	3093	3	in situ burning	Medium mammal	Femur	1	3
3090	3258	3093	3	in situ burning	Large mammal	Radius	1	1
3090	3258	3093	3	in situ burning	Sheep/Goat	Mandible	1	1
3090	3258	3093	3	in situ burning	Sheep/Goat	Mandible	1	2
3090	3258	3093	3	in situ burning	Sheep/Goat	Mandible	1	2
3090	3258	3093	3	in situ burning	Sheep/Goat	Mandible	1	2
3090	3258	3093	3	in situ burning	Pig	Pelvis	1	2
3090	3258	3093	3	in situ burning	Cattle	Loose maxillary row	1	2
3090	3258	3093	3	in situ burning	Sheep/Goat	Mandible	1	2
3090	3258	3093	3	in situ burning	Medium mammal	Metatarsus	1	1
3092	3091	3091	6	ditch	Large mammal	Skull	1	2
3092	3091	3091	6	ditch	Sheep/Goat	Mandible	1	1
3092	3091	3091	6	ditch	Sheep/Goat	Radius	1	1
3092	3091	3091	6	ditch	Large mammal	Femur	1	1
3092	3091	3091	6	ditch	Cattle	Metatarsus	1	1
3094	3093	3093	3	SFB	Cattle	Metatarsus	1	1
3096	3093	3093	3	SFB	Large mammal	Femur	1	2
3096	3093	3093	3	SFB	Large mammal	Long bone	1	1
3096	3093	3093	3	SFB	Sheep/Goat	Loose max cheek tooth	1	1
3096	3093	3093	3	SFB	Cattle	Maxilla	1	2
3096	3093	3093	3	SFB	Cattle	Loose mand cheek tooth	2	1
3096	3093	3093	3	SFB	Cattle	Mandible	1	1

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
3096	3093	3093	3	SFB	Sheep/Goat	Mandible	1	2
3096	3093	3093	3	SFB	Cattle	Humerus	1	2
3096	3093	3093	3	SFB	Large mammal	Rib	1	1
3096	3093	3093	3	SFB	Sheep/Goat	Metatarsus	1	2
3096	3093	3093	3	SFB	Cattle	PH3	1	2
3096	3093	3093	3	SFB	Sheep/Goat	Radius	1	1
3096	3093	3093	3	SFB	Sheep/Goat	Radius	1	1
3096	3093	3093	3	SFB	Cattle	Metatarsus	1	2
3096	3093	3093	3	SFB	Cattle	Metatarsus	1	2
3098	3166	3093	3	SFB	Sheep/Goat	Femur	1	3
3098	3166	3093	3	SFB	Cattle	Metatarsus	1	2
3098	3166	3093	3	SFB	Sheep/Goat	Mandible	1	2
3098	3166	3093	3	SFB	Cattle	Metatarsus	1	1
3098	3166	3093	3	SFB	Cattle	PH1	1	2
3098	3166	3093	3	SFB	Sheep/Goat	Mandible	1	2
3098	3166	3093	3	SFB	Sheep/Goat	Radius	1	2
3098	3166	3093	3	SFB	Sheep/Goat	Radius	1	2
3098	3166	3093	3	SFB	Sheep/Goat	Mandible	1	1
3098	3166	3093	3	SFB	Cattle	Metacarpus	1	1
3098	3166	3093	3	SFB	Large mammal	Rib	1	1
3098	3166	3093	3	SFB	Large mammal	Long bone	2	1
3098	3166	3093	3	SFB	Large mammal	Rib	1	2
3098	3166	3093	3	SFB	Cattle	Rib	1	2
3098	3166	3093	3	SFB	Roe Deer	Metatarsus	1	2
3100	3099	2825	3	pit	Sheep/Goat	Mandible	1	2
3100	3099	2825	3	pit	Sheep/Goat	Mandible	1	2
3102	3101	2825	3	pit	Medium mammal	Pelvis	1	1
3102	3101	2825	3	pit	Cattle	PH1	1	1
3102	3101	2825	3	pit	Cattle	Metapodial	1	1
3102	3101	2825	3	pit	Cattle	PH1	1	2
3102	3101	2825	3	pit		Mandible	1	1
3102	3101	2825	3	pit	Sheep/Goat	Metatarsus	1	1
3106	3101	2825	3	pit	Chicken	Carpometacarpus	2	1
3123	3122	2825	3	pit	Large mammal	Long bone	1	1
3123	3122	2825	3	pit	Sheep/Goat	Mandible	1	2
3126	3125	2979	1	post hole	Large mammal	Long bone	1	1
3128	3127	2395	5	ditch	Cattle	Humerus	1	3
3138	3247	2168	1		Pig	Fibula	1	1
3138	3247	2168	1		Cattle	Humerus	1	0
3138	3247	2168	1		Sheep/Goat	Tibia	1	1
3138	3247	2168	1		Sheep/Goat	Mandible	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
3138	3247	2168	1		Sheep/Goat	Mandible	1	2
3138	3247	2168	1		Cattle	Mandible	1	3
3138	3247	2168	1		Sheep/Goat	Mandible	1	2
3138	3247	2168	1		Cattle	Metatarsus	1	3
3144	3143	2069	1	ditch	Pig	Incisor	1	1
3148	3146	2686	2	deposit in SFB	Horse	Tibia	1	2
3148	3146	2686	2	deposit in SFB	Large mammal	Radius	1	2
3148	3146	2686	2	deposit in SFB	Cattle	Horncore	1	2
3148	3146	2686	2	deposit in SFB	Sheep/Goat	Pelvis	1	1
3150	3146	2686	2	deposit in SFB	Cattle	Humerus	1	1
3150	3146	2686	2	deposit in SFB	Horse	Metacarpus III	1	3
3150	3146	2686	2	deposit in SFB	Horse	Radius	1	2
3150	3146	2686	2	deposit in SFB	Sheep/Goat	Skull	1	2
3153	3152	2291	3	ditch fill	Large mammal	Scapula	1	2
3153	3152	2291	3	ditch fill	Cattle	Maxilla	1	1
3154	3152	2291	3	ditch fill	Sheep/Goat	Tibia	1	2
3154	3152	2291	3	ditch fill	Dog	Mandible	1	2
3154	3152	2291	3	ditch fill	Sheep/Goat	Mandible	1	1
3155	3152	2291	3	ditch fill	Cattle	Mandible	1	2
3155	3152	2291	3	ditch fill	Cattle	Metacarpus	1	1
3155	3152	2291	3	ditch fill	Cattle	Maxilla	1	2
3155	3152	2291	3	ditch fill	Sheep/Goat	Mandible	1	2
3155	3152	2291	3	ditch fill	Cattle	Metacarpus	1	2
3155	3152	2291	3	ditch fill	Sheep/Goat	Pelvis	1	3
3155	3152	2291	3	ditch fill	Large mammal	Ulna	1	3
3155	3152	2291	3	ditch fill	Sheep/Goat	Radius	1	2
3155	3152	2291	3	ditch fill	Pig	Mandible	1	2
3163	3161	2291	3	ditch fill	Sheep/Goat	Humerus	1	1
3163	3161	2291	3	ditch fill	Sheep/Goat	Mandible	1	2
3163	3161	2291	3	ditch fill	Pig	Tibia	1	1
3163	3161	2291	3	ditch fill	Pig	Tibia	1	2
3163	3161	2291	3	ditch fill	Cattle	Mandible	1	2
3164	3166	3093	3	fill of SFB	Sheep/Goat	Metacarpus	1	0
3164	3166	3093	3	fill of SFB	Sheep/Goat	Metatarsus	1	2
3164	3166	3093	3	fill of SFB	Sheep/Goat	Mandible	1	2
3164	3166	3093	3	fill of SFB	Sheep/Goat	Mandible	1	1
3164	3166	3093	3	fill of SFB	Cattle	Metacarpus	1	1
3164	3166	3093	3	fill of SFB	Medium mammal	Radius	1	2

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
3164	3166	3093	3	fill of SFB	Sheep/Goat	Femur	1	1
3165	3166	3093	3	fill of SFB	Cattle	Radius	1	2
3165	3166	3093	3	fill of SFB	Cattle	Metatarsus	1	1
3165	3166	3093	3	fill of SFB	Cattle	PH1	1	2
3165	3166	3093	3	fill of SFB	Cattle	Metacarpus	1	1
3165	3166	3093	3	fill of SFB	Cattle	PH2	1	1
3165	3166	3093	3	fill of SFB	Cattle	Astragalus	1	1
3165	3166	3093	3	fill of SFB	Sheep/Goat	Humerus	1	2
3165	3166	3093	3	fill of SFB	Sheep/Goat	Mandible	1	2
3168	3167	2168	1	fill of SFB	Goose	Ulna	1	0
3168	3167	2168	1	fill of SFB	Sheep/Goat	Loose mand cheek tooth	1	2
3168	3167	2168	1	fill of SFB	Cattle	Loose mand cheek tooth	1	1
3168	3167	2168	1	fill of SFB	Cattle	Horncore	1	1
3168	3167	2168	1	fill of SFB	Sheep/Goat	Metatarsus	1	1
3168	3167	2168	1	fill of SFB	Large mammal	Rib	1	1
3168	3167	2168	1	fill of SFB	Cattle	Astragalus	1	2
3168	3167	2168	1	fill of SFB	Sheep/Goat	Mandible	1	1
3168	3167	2168	1	fill of SFB	Cattle	Metacarpus	1	1
3168	3167	2168	1	fill of SFB	Cattle	Metacarpus	1	3
3168	3167	2168	1	fill of SFB	Sheep/Goat	Tibia	1	1
3168	3167	2168	1	fill of SFB	Cattle	Metapodial	1	2
3168	3167	2168	1	fill of SFB	Chicken	Coracoid	1	0
3168	3167	2168	1	fill of SFB	bird	Radius	1	0
3168	3167	2168	1	fill of SFB	Sheep/Goat	Metapodial	1	1
3168	3167	2168	1	fill of SFB	Pig	Radius	1	2
3168	3167	2168	1	fill of SFB	Sheep/Goat	Radius	1	2
3168	3167	2168	1	fill of SFB	Sheep/Goat	Humerus	1	2
3168	3167	2168	1	fill of SFB	Sheep/Goat	Pelvis	1	1
3168	3167	2168	1	fill of SFB	Cattle	Rib	1	1
3169	3167	2168	1	fill of SFB	Sheep/Goat	Metacarpus	1	2
3169	3167	2168	1	fill of SFB	Sheep/Goat	Mandible	1	1
3169	3167	2168	1	fill of SFB	Pig	Incisor	1	1
3169	3167	2168	1	fill of SFB	Sheep/Goat	Loose max cheek tooth	1	1
3169	3167	2168	1	fill of SFB	Cattle	Tibia	1	2
3169	3167	2168	1	fill of SFB	Cattle	Humerus	1	3
3170	3167	2168	1	Fill of SFB	Sheep/Goat	Mandible	1	2
3171	3167	2168	1	fill of SFB	Cattle	Mandible	1	2
3171	3167	2168	1	fill of SFB	Large mammal	Rib	1	2
3171	3167	2168	1	fill of SFB	Sheep/Goat	Metapodial	1	1
3199	3198	2071	2	ditch	Cattle	Humerus	1	1

Context	Cut	Group	Phase	Feature type	Taxon	Element	Number of frags	Erosion
3199	3198	2071	2	ditch	Medium mammal	Femur	1	2
3209	3206	2350	2	pit	Sheep/Goat	Mandible	1	2
3209	3206	2350	2	pit	Sheep/Goat	Mandible	1	2
3209	3206	2350	2	pit	Cattle	Metatarsus	1	2
3209	3206	2350	2	pit	Cattle	Scapula	1	3
3209	3206	2350	2	pit	Sheep/Goat	Pelvis	1	2
3209	3206	2350	2	pit	Cattle	Mandible	1	1
3210	3167	2168	1	fill of pit/SFB?	Large mammal	Rib	1	1
3210	3167	2168	1	fill of pit/SFB?	Pig	Mandible	1	2
3212	3211	3091	6	ditch	Pig	Metapodial	1	1
3246	3247	2168	1		Cattle	Mandible	1	1
3252	3251	3093	3	structure	Large mammal	Long bone	1	1
3252	3251	3093	3	structure	Cattle	Radius	1	3
3252	3251	3093	3	structure	Medium mammal	Fibula	1	2
3252	3251	3093	3	structure	Cattle	Scapula	1	2
3252	3251	3093	3	structure	Sheep/Goat	Mandible	1	2
3252	3251	3093	3	structure	Sheep/Goat	Mandible	1	1
3253	3251	3093	3	structure	Large mammal	Mandible	1	1
3253	3251	3093	3	structure	Cattle	Incisor	1	1
3253	3251	3093	3	structure	Sheep/Goat	Mandible	1	2
3259	3258	3093	3	SFB	Cattle	Scapula	1	4
3259	3258	3093	3	SFB	Cattle	Scapula	1	3
3259	3258	3093	3	SFB	Large mammal	Femur	1	1
3259	3258	3093	3	SFB	Cattle	Ulna	1	3
3259	3258	3093	3	SFB	Cattle	Tibia	1	2
3259	3258	3093	3	SFB	Cattle	Incisor	1	2
3262	3258	3093	3	SFB	Sheep/Goat	Mandible	1	1
3262	3258	3093	3	SFB	Sheep/Goat	Pelvis	1	1
3262	3258	3093	3	SFB	Sheep/Goat	Mandible	1	2
3262	3258	3093	3	SFB	Large mammal	Rib	1	1
3262	3258	3093	3	SFB	Dog	Mandible	1	1
3262	3258	3093	3	SFB	Sheep/Goat	Metatarsus	1	1
3262	3258	3093	3	SFB	Sheep/Goat	Tibia	1	2
3262	3258	3093	3	SFB	Sheep/Goat	Radius	1	2
3262	3258	3093	3	SFB	Cattle	Mandible	1	1
3263	3258	3093	3	SFB	Sheep/Goat	Loose mandibular row	1	1
3263	3258	3093	3	SFB	Sheep/Goat	Mandible	1	1
3263	3258	3093	3	SFB	Medium mammal	Scapula	1	1
3263	3258	3093	3	SFB	Large mammal	Long bone	1	1

Table 45: Faunal remains catalogue

C.4 Mollusca by Carole Fletcher

Introduction and Methodology

C.4.1 Marine mollusca were collected by hand and by sampling during the archaeological works. A number of the features were sampled for the recovery of shell, and these comprised approximately 5% of the material from the sections excavated through features, perhaps a 2% sample of layers.

C.4.2 The shells recovered are almost entirely edible examples of oyster Ostrea edulis, from estuarine and shallow coastal waters, with small fragments of mussel Mytilus edulis recovered from a single sample.

C.4.3 The shells were weighed, recorded by species, and right and left valves noted, when identification could be made, using Winder (2011 and 2015) as a guide. The data was recorded in an Access 2003 database and is summarised in the catalogue that forms part of this report. The minimum number of individuals is not recorded, this may be established by noting the greater number of left or right valves. Winder uses the criterion of a minimum number of 30 measurable individuals, of either left or right valves, in her report on the Heybridge assemblage (Winder 2015). No feature fulfils this criterion, due in part to much of the assemblage being in poor condition and the bulk of the shells being incomplete. Infestation/predation damage to the shell or encrustation was noted, although exact identification of the infesting organism could not always be made.

C.4.4 The shell assemblage is poorly preserved, with many of the shells having lost some or all of their mantle and inner nacreous layer. Small to large old shells are present and the assemblage does not appear to have been deliberately broken or crushed, although it has undergone post-depositional damage.

C.4.5 The marine mollusca and archive are curated by Oxford Archaeology East until formal deposition.

Factual Data

C.4.6 In total, 322 identifiable shells and 334 indeterminate fragments of shell, weighing 3.461kg, were recovered, from a wide range of features, ditches, pits, midden deposits and the SFBs. Few contexts, or cut features, contained enough shells to indicate one or more meals of oysters alone, however, they may have been combined with other foods. The largest number of shell fragments was recovered from the midden layers.

C.4.7 Throughout the assemblage of identifiable shells or fragments of shell and indeterminate only 2 oyster shells show evidence of damage, in the form of a small 'U', 'V' or 'W'-shaped hole on the outer edge (usually) of the left valve. This damage is likely to have been caused by a knife during the opening or 'shucking' of the oyster, prior to its consumption. Even these two examples are tentative identifications of shucking, due to the poor condition of the two shells.

C.4.8 The stratigraphic assemblage divides into five phases and spatially into five site plots. No shell was recovered from Phase 6.

	Plot	Species	Common Name	No. of shells or fragments	Total no. shucked shells	Weight (kg)	% of Total Assemblage
Phase 1: Mid 1st to 2nd century AD	1	*Ostrea edulis*	Oyster	361	0	1.313	37.9
	1	*Mytilus edulis*	Mussel	17	0	0.002	0.1
Phase 1 Total				**378**	**0**	**1.315**	**38**
Phase 2: 2nd century AD	1	*Ostrea edulis*	Oyster	171	1	1.265	36.6
	2	*Ostrea edulis*	Oyster	46	0	0.548	15.8
	4	*Ostrea edulis*	Oyster	2	0	0.010	0.3
Phase 2 Total				**219**	**1**	**1.823**	**52.7**
Phase 3: 2nd to mid 3rd century AD	2	*Ostrea edulis*	Oyster	52	1	0.311	9
Phase 3 Total				**52**	**1**	**0.311**	**9**
Phase 4: 3rd century AD	1	*Ostrea edulis*	Oyster	1	0	0.002	0.1
Phase 4 Total				**1**	**0**	**0.002**	0.1
Phase 5: 3rd to mid 4th century AD	2	*Ostrea edulis*	Oyster	6	0	0.010	0.3
Phase 5 Total				**6**	**0**	**0.010**	**0.3**

Table 46: Shell assemblage by Phase and Plot

C.4.9 Phase 1 produced the second largest assemblage, all from Plot 1, with the bulk of the assemblage recovered from the SFB (Group **2168**), mostly from the midden deposit. Much of the shell was recovered from sample 124, which slightly skews the results, due in part to the large number of indeterminate fragments that the sampling recovered, compared with the hand excavated material from Group **2168**. However, it also indicates a large amount of shell was present in the midden material. In total, Group **2168** produced 51 right and 85 left oyster valves, alongside 241 indeterminate fragments, which includes 17 fragment of mussel shell, not found elsewhere on the site.

C.4.10 The only other shell from Plot 1 was recovered from ditch **2002**, Group **2236**.

C.4.11 Plot 2, pit group **2100** produced 0.225kg of oyster shell, comprising 12 shells, five and four left valves. The remainder of the shell was retrieved from SFB **2686** (Group 2686), which produced a similar amount of shell to the ditch, 11 right valves and 13 left valves and indeterminate fragments.

C.4.12 Plot 4 produced only two shell fragments, from pit **2700**, Group 2057.

C.4.13 Phase 2 produced the largest assemblage of shell from features, across three plots. From Plot 1, shell was recovered from ditches **2083** and **2014**, both in Group 2014, again the material recovered from sample 100 slightly skews the results, however, it indicates the ditch contexts contained a relatively large number of shells. Group 2014 produced 29 right valves, of which a single example may be shucked, 38 left oyster valves and 46 indeterminate fragments (0.624kg).

C.4.14 Shell was also recovered from SFB Group **2246** (0.629kg), 13 right and 24 left valves, alongside 20 indeterminate fragments, and a single shell was recovered from pit **4008**.

C.4.15 Phase 3, Plot 2 produced a much-reduced assemblage (0.311kg), all recovered from SFB group **3093**, from which samples were taken, however, these did not produce much shell, in total 11 right and 32 left valves, including a single, possibly shucked, example of a left valve, were identified, with 9 indeterminate fragments also present.

C.4.16 Phase 4 produced only a single indeterminate fragment of oyster (0.002kg) from layer 2203, Group 2007 in Plot 1.

C.4.17 A single pit **2727**, from Group 2560 in Plot 2, produced the only shell in Phase 5, six fragments (0.010kg) of which, two right valves and a single left valve were identified.

Discussion

C.4.18 The presence of marine mollusca indicates transportation of a marine food source to the site, transported along Stane Street or the river and that it formed an important part of the Roman diet. The small number of mussel shells recovered may be due to their fragile nature by comparison with the oyster shell, which itself has been poorly preserved. It more likely indicates that they were not being consumed.

C.4.19 In Phase 1, left valves predominate and, even though shucking marks are not common, being limited to a single shell, oysters eaten raw are eaten from the left shell. In Phase 2, the numbers are more evenly balanced, although the number of shucked shells is still disproportionately low, again only a single example. The shell recovered from Phases 3, 4 and 5 shows no evidence of shucking, although it is possible that some of the post-depositional damage destroyed has destroyed shucking and other less significant marks. The extremely low number of shucked shells, relative to the total shell numbers, suggests that the bulk of the oysters may have been cooked, rather than eaten raw. Shells, when cooked in boiling liquid, will mostly open without the use of force; a discussion regarding disposing of shellfish that do not open after cooking is not required here.

C.4.20 The shells demonstrate the ability of the occupants of the roadside settlement to access foods sources beyond their immediate area and surrounding hinterland. The shells recovered vary from young specimens, through small medium and larger oysters, while few thick, or what might be considered older, specimens are present in the assemblage, with small to medium and medium as the most common sizes. These represent general discarded food waste. The low levels of other marine species present suggest that these are accidental inclusions.

C.4.21 Although not closely datable in themselves, the mollusca may be dated by their association with pottery, or other material, also recovered from the features.

C.4.22 It is very noticeable that there is a rapid fall in the number of shells recovered after Phase 2, suggesting that rubbish may be being deposited elsewhere. However, there may be other reasons for this change. The different layout and change of building style in Phase 3 may be reflected in other aspects of the life of the settlement. It is possible that there were changes in the availability of oysters at this time. By Phase 4, the area appears to have been turned over to middening (See section 2.5.1).

Statement of Potential

C.4.23 The assemblage has little potential to aid local, regional and national research priorities.

Further work

C.4.24 A statement should be prepared for publication and the catalogue acts as a full archival record, beyond this no further work is recommended.

Retention, dispersal and display

C.4.25 The assemblage is in poor condition and the marine mollusca be deselected prior to archive deposition.

Catalogue

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
1	2237	**2236**	2002	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	1	0	0	Partial right valve, heavily damaged on the anterior and ventral margins. Much of the external surface has been lost, with complete loss of the internal surface, resulting in a very powdery shell. There are slight traces of marine worm boring damage	0.009
1	2319	**3167**	2168	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	24	0	0	Two near-complete medium right valves, one with some loss of the upper surface of the shell, size, with slight damage to the ventral/anterior margin. Incomplete medium right valve, with loss of almost the entire ventral margin, and internal surface loss. Some external surface loss, and the shell is powdery. Three partial medium right valves, all in poor condition and damaged, with the dorsal margin on all of them showing the least amount of damage. All are flaking, powdery and have suffered serious surface loss. Two incomplete small right valves, both are damaged along the ventral and anterior margins, have suffered some surface loss and are powdery and flaky.	0.167

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
											Three partial medium right valves. All very damaged suffering loss of the majority of their surfaces and are powdery and flaking. One near-complete small right valve, with minor damage to the ventral margin. Three small incomplete right valves, all damaged on ventral margin and one has also lost the dorsal margin. Nine fragments of right valves, all damaged, all having suffered loss of surface, most are incredibly flaky and powdery	
1	2319	**3167**	2168	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	179	0	Soft, powdery undiagnostic/indeterminate fragments of oyster shell	0.118
1	2319	**3167**	2168	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	48	0	0	0	Near-complete medium to large left valve, a relatively thick older shell. Although the shell itself is near-complete, it has lost both external and internal surface and as a result is powdery to the touch. There is slight worm boring damage along the midline. Two incomplete large to medium left valves, damaged along the ventral margin and having suffered large losses of external surface, resulting in being powdery and flaking to the touch. One shell has small areas of the external surface surviving, shows damage from marine worm borings Incomplete medium left valve, damage to the anterior margin with a young oyster shell attached to the upper surface. A thick older shell, much of the internal surface has been damaged	0.422

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
											and large chunks of the lining have flaked away. Six incomplete medium left valves, all of which have lost varying amounts of their internal and external surfaces, and as a result of flaking and soft to the touch. All are damaged on the ventral margin, with much of the ventral margin missing and some have slight damage on the anterior margin. Several are moderately thick, indicating some age to the shell. Two small to medium incomplete left valves, one from a thicker, older shell that has lost almost all its outer surface and quite a lot of the inner, and is flaking and powdery. On the ventral margin is a hole that could be a shucking mark. However, the damage to the shell and its loss of surfaces makes this uncertain. The second shell has entirely lost all its surfaces, is very flaky yet still bears traces of marine worm boring damage. Three partial left valves, two of which have damage to both anterior and posterior margins. The third is also damaged, mainly on the posterior margin. All have lost the majority of their surfaces and are powdery and flaking. One near-complete small left valve with minor damage to the ventral margin, and a slightly thicker shell that is only really soft and flaky around its outer edges. 15 incomplete small left valves, most having lost much of their exterior surface and being flaky and powdery. One is a slightly	

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
											thicker older shell, and a single shell has a hole, probably caused by a predatory gastropod. Two shells have completely lost all of their external and internal surface. 17 fragments of left valve, all in very poor condition, mostly soft and flaking; several show evidence of marine worm boring damage	
1	2319	**3167**	2168	Mussel	*Mytilus edulis*	Intertidal zone	0	0	17	0	Small fragments of mussel shell, too small to be certain if it is marine or freshwater, although as it was found with the oyster, the likelihood is that it is marine	0.002
1	2972	**3247**	2168	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	3	0	0	One medium to large near-complete right valve, with moderate damage to the ventral margin, which has flattened off the edge of the shell. The shell is in reasonable condition, with only slight surface loss and is only powdery around the edges. Internally, there appears to be marine worm boring damage. One small complete right valve, with moderate damage to the upper surface and some surface loss, resulting in powdery areas of the shell. There is some survival of horny scale. Incomplete complete small right valve in very poor condition, having lost much of its surface and being very powdery	0.030
1	2972	**3247**	2168	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	8	0	0	0	One near-complete medium left valve, with only minor damage to the ventral and anterior margin, otherwise the shell is in good condition, with only minor surface loss towards the dorsal margin. Single incomplete medium left valve having suffered moderate damage to the ventral and anterior margin, resulting in the interior of	0.069

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
											the shell being quite powdery. The thickness of the shell indicates some age and there are traces of colour banding on the external surface. Six partial left valves, from shells of indeterminate size, all in poor condition and powdery. The most complete retains some external surface and is a relatively thick, old shell. The shell does retain some colour banding, one of the smaller fragments has suffered marine worm boring damage	
1	2972	**3247**	2168	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	10	0	Small to medium indeterminate shell fragments, and many small flakes, all extremely powdery and in very poor condition	0.011
1	3017	**3167**	2168	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	30	0	30 abraded fragments of soft powdery shell and numerous flakes, all are very soft and flaky and dusty	0.056
1	3017	**3167**	2168	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	20	0	0	Two near-complete small to medium right valves with small amounts of damage to the anterior edge and some upper surface loss. Four incomplete small to medium right valves, with damage to the ventral margin, several with damage to the anterior margin. The shells are soft and flaking and all have suffered some external and internal surface loss several, although they retain fragments of horny scale One incomplete small to medium right valve, damaged mostly on the posterior margin. The shell is slightly soft and flaking and there is a small amount of marine worm boring damage towards the dorsal margin	0.085

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
											Five incomplete small right valves. All have suffered varying degrees of damage to the ventral margin, some have completely lost their outer surface. All are soft, powdery and flaking Eight fragments from right valves. All are powdery and in poor condition	
1	3017	**3167**	2168	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	27	0	0	0	One near-complete large left valve with slight damage to the ventral margin. There is also some loss of surface towards the dorsal margin on the anterior side, where the shell has become soft and slightly flaking. Internally, there is some concretion, which appears to be post-depositional. The shell is moderately thick, indicating some age. Two near-complete-partial medium left valves. The two shells have very little actual damage to their margins, although they are missing the majority of the upper and internal surfaces, and are, as a result, very flaky and powdery. 11 incomplete left valves, all have damage to the ventral and posterior margins, and several have completely lost their outer surfaces. All are flaky and in poor condition and six of the shells show minor to moderate marine worm boring damage. 13 fragments from left valves, all are heavily damaged flaking and powdery. There are only small amounts of margins surviving and most shells have lost their surfaces, and they are in very poor condition	0.204

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
1	3055	**3247**	2168	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	1	0	0	0	Near-complete small left valve, with moderate damage to the ventral margin	0.002
1	3055	**3247**	2168	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	1	0	0	Incomplete small distorted right valve, missing ventral margin	0.003
1	3056	**3247**	2168	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	2	0	0	One medium to large near-complete right valve, with minor damage to the ventral margin. Extensive loss of surface on the interior has resulted in the shell becoming quite powdery, although most of the external surfaces is present, including some survival of horny scale. There is one very small area of possible marine boring worm damage. Incomplete right valve, heavily damaged along ventral and anterior margins across to the central line. The surfaces are in moderately good condition, with the shell only being powdery along its edges. The upper surface retains some traces of colour banding and some horny scale	0.039
1	3138	**3247**	2168	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	5	0	Five fragments of shell in poor condition. All are very powdery and have suffered extensive damage	0.052
1	3138	**3247**	2168	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	1	0	0	0	One near-complete medium left valve, which has suffered some damage to the ventral margin. The shell is slightly powdery, although upper and inner surfaces survive relatively intact. There are several small holes on the outer surface of the shell, which may be the result of boring by *Cliona celata*	0.025

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
1	3138	**3247**	2168	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	1	0	0	One near-complete medium right valve, with minor damage to the ventral margin. The outer and inner surfaces survive. The external surface is somewhat encrusted with post-depositional material, with some horny scale still visible	0.021
2	2017	**2014**	2014	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	21	0	21 moderately sized fragments and many small fragments and powdery dust form the last of the material from this context, and all the fragments are powdery. One fragment is from an old shell, the hinge being somewhat thick. At least one fragment shows evidence of marine worm boring	0.041
2	2017	**2014**	2014	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	9	0	0	One complete small to medium right valve, with some survival of horny scale and some slight post-depositional damage. The shell is slightly powdery. Five small to medium near-complete right valves, all having suffered damage to the ventral margin, most likely post-depositional. All are powdery to varying degrees. There is survival of horny scale on at least one shell and another shows traces of marine worm boring damage. Three incomplete small right valves, all damaged along the ventral and anterior margin and all very powdery	0.070
2	2017	**2014**	2014	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	21	0	0	0	One complete medium left valve with slight survival of horny scale and slight damage to the ventral and posterior margin. The shell is moderately old and very powdery, having lost at least part of this upper surface. One near-complete small to medium right valve with moderate damage on all margins, most likely post-depositional, as the shell is powdery on its edges. There	0.144

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
											is some survival of horny scale and some slight colouring present in the banding. Eight incomplete small to medium left valves, all are very powdery, with extensive damage to the ventral and, in some cases, the posterior margin. One shell retains some colour in the banding and one shell has completely lost its outer surface. Seven incomplete small left valves. All have suffered damage to the ventral margin, and some, on all margins. All the shells are very powdery, several having lost much of the outer surface and one, having lost all of its outer surface. A single valve, somewhat distorted, is relatively narrow. Four partial right valves, all heavily damaged and powdery, one of which retains traces of marine worm boring damage	
2	2084	**2083**	2014	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	17	0	0	0	One large near-complete left valve, having suffered moderate damage on the ventral and posterior margin. There is some surface loss internally and externally, leaving the shell somewhat powdery. There is moderate damage from marine boring worms on the surface of the shell and the shell itself is relatively thick and old. Two incomplete medium left valves, both with moderate damage on the ventral margin and relatively extensive damage to the posterior margin. One shell has suffered a large amount of internal and external surface loss, resulting in it being very powdery. The shell is also relatively thick	0.144

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
											and old. The second shell retains much more of its surface, both internally and externally and also retains some slight colour banding. Three partial left valves, heavily damaged and having lost much of the internal surface and varying amounts of the external surface. The shells are powdery and in poor condition. 11 incomplete left valves, all heavily damaged and powdery, having lost most of their surfaces, retaining only enough of the ribbed surface to be recognisable as left valves	
2	2084	**2083**	2014	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	25	0	25 moderately-sized fragments and many small fragments and powdery dust form last of the material from this context, all the fragments are powdery and in poor condition	0.032
2	2084	**2083**	2014	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	20	0	1	One near-complete medium to large right valve, with very slight damage to the ventral margin. There has been some loss of upper surface and the interior has lost much of its surface. There is some survival of horny scale, although the shell is very powdery. Two complete medium right valves, with slight damage to the ventral margin. Much of the interior surface from both shells has been lost and they are both powdery. There is good survival of horny scale on one shell. Two near-complete medium right valves, with moderate damage to the ventral margins and some survival of horny scale. As with the other shells, much of the internal surface has been lost and the shell is powdery. There is a possible shucking mark on one shell.	0.193

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
											Six near-complete right valves, all with moderate amounts of damage to the ventral margin. All have suffered some degree of surface loss, especially the internal surface and as a result of this the shells are powdery. There is some survival of horny scale on some of the shells and also colour banding surviving on one shell. There are slight traces of marine worm boring damage on two shells. One small to medium incomplete right valve, badly damaged on ventral and anterior margins, where one might expect find a shucking mark, however, this appears to be post-depositional damage. The shell has some survival of horny scale but has lost, like the other shells, most of its inner surface and is very powdery. Five small to medium partial right valves, all having suffered major damage to the ventral margin and, in some cases, all margins. All of the shell is powdery having suffered varying degrees of surface loss and again, having lost most of the inner surfaces. There is slight survival of horny scale on several shells and colour banding also survives on one shell. A single shell bears slight traces of marine worm boring damage. Three small incomplete right valves, all very badly damaged, missing varying amounts of external surface, all having lost the majority of the internal surface. As a result the shells are very powdery and fragile. Only one shell retains some horny	

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
											scale and also slight colouring in the banding	
2	2102	**2100**	2100	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	1	0	0	0	Single large incomplete left valve, damaged on the ventral margin and on the ventral-anterior margin, possibly during excavation. Where the shell is broken, it is relatively friable, otherwise the surfaces are intact. The shell has suffered moderate damage from marine worm boring possibly *Polydora ciliate*	0.033
2	2102	**2100**	2100	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	2	0	0	Two medium right valves, damaged mostly on the ventral margin, both in poor condition and rapidly losing all of their surfaces, and extremely powdery.	0.018
2	2103	**2100**	2100	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	3	0	0	0	One large near-complete left valve from an older, thicker shell with moderate damage to the ventral margin and very slight damage to the dorsal margin. The shell is slightly powdery in the areas where it is damaged. Externally, the shell shows moderate evidence of marine worm burrows, possibly the result of *Polydora ciliate*. Two medium to large incomplete left valves, both are powdery, having suffered surface loss, one is very badly damaged along the ventral margin, the other less so, the latter shell also bears evidence of marine worm burrows. Both shells are very soft and friable where they are damaged	0.109
2	2103	**2100**	2100	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	3	0	0	One medium to large incomplete right valve, heavily damaged on the ventral and ventral-anterior margin. There are traces of colour banding on the outer surface and the inner surface survives and is somewhat iridescent. The shell is very powdery along the broken	0.048

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
											edge. Two incomplete medium right valves, both are slightly powdery, one is damaged on the ventral and ventral-anterior margin. On the other shell, the majority of damage is just on the ventral margin. There is some survival of horny scale on the latter shell	
2	2103	**2100**	2100	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	3	0	Three fragments of shell in very poor condition, having lost almost all of the surfaces and being very soft and powdery	0.017
2	2247	**2246**	2246	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	1	0	0	0	Incomplete left valve, which has entirely lost its external surface and much of its internal surface. The shell has also broken in two and is extremely powdery. There is extensive damage to the anterior margin and a large notch in the posterior margin, which could be a shucking mark. However, the condition of the shell is so poor that this could equally be post-depositional damage	0.011
2	2251	**2246**	2246	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	1	0	0	Single incomplete medium to large right valve, with damage to ventral and anterior margins. There is some external surface loss and extensive internal surface loss. The shell is powdery and in poor condition	0.016
2	2251	**2246**	2246	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	2	0	0	0	Near-complete medium left valve, with some damage to the posterior margin. The shell has suffered extensive surface loss, both internally and externally, resulting in it being very powdery and in poor condition. Fragment of left valve, retaining its external surface but having lost its internal surface; what remains of the shell is very powdery	0.017

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
2	2254	**2246**	2246	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	10	0	0	One near-complete medium to large right valve, which has suffered some internal surface damage and the shell is somewhat powdery internally. Externally, there is some survival of horny scale, but the shell is slightly damaged at the dorsal margin and along the ventral-anterior margin. Two near-complete medium right valves, both having suffered damage to the ventral margin and one damage to the posterior margin. Both are relatively flaky, having lost part of their inner surface and horny scale survives on both shells' upper surfaces. Three incomplete right valves. Two, heavily damaged on ventral margin, have had some surface loss and are powdery. Horny scale survives on the upper surfaces of both shells, while the third shell has completely lost its upper surface and is extremely fragile. Four incomplete small right valves, all heavily damaged and powdery. There is some survival of horny scale and light damage from marine worm borings	0.173

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
2	2254	**2246**	2246	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	20	0	0	0	Four near-complete medium to large left valves. All have moderate damage on their ventral and some also on the posterior margin and have suffered some surface loss and are quite powdery. A single shell retains some colouration in the banding and traces of horny scale. One incomplete medium to large left valve, heavily damaged on both posterior and anterior margins, relatively undamaged on the ventral margin. Surface loss has resulted in the shell being soft and powdery. There is some marine worm boring on the upper surface of the shell. One complete medium left valve that has suffered extensive surface loss and is powdery to the touch Three near-complete medium left valves, with moderate damage to the ventral margin, and, as with almost all of the shells, there has been surface loss and the shell is powdery. There are traces of marine worm burrows on one shell. Six incomplete left valves, all having suffered moderate amounts of damage to the ventral margin and several have somewhat heavy damage to the posterior margin. All have suffered surface loss, especially internally and are quite powdery. Four of the shells have traces of marine worm burrows on the upper surface. Three incomplete small left valves, damaged on the ventral and posterior margin. The shells are all powdery, having suffered a large amount of surface loss. One	0.319

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
											is relatively thick, suggesting some age. Two partial left valves, having suffered heavy damage to all bar the dorsal margin. Both are relatively thick sherds, suggesting some age but are fragile and flaking.	
2	2254	**2246**	2246	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	17	0	17 abraded fragments of soft powdery shell and a large number of uncountable very small flakes, the majority of which it would be difficult to assign a valve; all are very soft and flaky and dusty	0.032
2	2505	**2504**	2246	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	3	0	Three fragments of soft powdery shell in very poor condition, all of which may be from the same shell	0.003
2	2509	**2504**	2246	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	2	0	0	One near-complete medium right valve, completely missing its dorsal margin and with some internal and external surface loss, resulting in the shell being powdery.	0.038

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
											One incomplete right valve with major damage to the posterior and ventral margins. The external surface is mostly present, although there is a degree of inner surface loss and the shell is soft and powdery	
2	2509	**2504**	2246	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	1	0	0	0	One near-complete medium left valve, with moderate damage to the ventral margin, and having suffered major external and internal surface loss, resulting in the shell being soft and powdery	0.020
2	2527	**2526**	2350	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	1	0	0	Near-complete right valve, with slight damage to the ventral-posterior margin. Externally, the surfaces are in reasonable condition, with very slight traces of possible marine worm boring damage. However, internally the majority of the surface has been lost and the shell is relatively powdery. The hinge is moderately thick, indicating some age to the shell	0.032
2	2688	**2686**	2686	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	6	0	0	Complete medium right valve, with only very minor damage to the ventral edge, as with almost every other shell in the assemblage, it is powdery and soft, having lost some of the internal surface and partially its external surface, although there is a survival of horny scale and slight traces of marine worm borings. Two incomplete medium right valves, both having undergone relatively major damage to the ventral margin, and in one case, the almost entire removal of the posterior margin. One shows moderate damage caused by marine worm boring and is very soft and powdery. The second shell, with a more extensive posterior margin damage, is unusually not powdery and has good survival of horny scale.	0.059

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
											One small near-complete, relatively thick and old right valve, somewhat soft on the under surface. The upper surface is mostly present and shows evidence of horny scale. Two incomplete small right valves, both powdery and heavily damaged on the ventral posterior and anterior margins	
2	2688	**2686**	2686	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	6	0	Six abraded fragments of soft powdery shell and numerous flakes, the majority of which it would be difficult to assign a valve. All are very soft and flaky and dusty	0.013
2	2688	**2686**	2686	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	8	0	0	0	A single near-complete medium left valve, with extensive internal surface loss. Some external surface loss around the dorsal margin, resulting in the shell being very soft and powdery. The shell is relatively thick and there is a single hole or borrow in the lower part of the shell, close to the ventral margin, possibly made by a predatory gastropod; the hole does not penetrate entirely through the shell. Two incomplete small left valves, severely damaged on most of the margins, and soft and powdery. Five partial left valves. All are badly damaged, soft and powdery, having lost most of their surfaces	0.079
2	2702	**2700**	2057	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	1	0	Fragment of indeterminate valve, heavily damaged, with surface loss and very powdery.	0.003
2	2702	**2700**	2057	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	1	0	0	0	One near-complete small to medium left valve, with moderate damage to the ventral margin. There is some external surface loss, and the shell is powdery.	0.007

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
											There is a small amount of marine worm boring damage above the surviving portion of ventral margin	
2	2832	**2686**	2686	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	2	0	0	0	One medium near-complete left valve in relatively poor condition, having lost part of both internal and external surfaces, resulting in the shell being very powdery. One incomplete left valve, badly damaged on the posterior ventral and anterior margins. Much of the internal surface has been lost part, as has part of the external surface, and the shell is very powdery	0.026
2	2832	**2686**	2686	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	2	0	0	One near-complete small to medium right valve, which has suffered minor damage on the ventral and posterior margins, which is very likely post-depositional. Externally and internally, the shell has suffered some surface loss and is moderately powdery. There is slight damage to the upper surface, which may be marine worm boring. One incomplete small to medium right valve, heavily damaged on the ventral margin, with some damage to the posterior margin. There has been surface loss, although some horny scale survives. The surface is unstable and the shell is quite powdery	0.017
2	2833	**2686**	2686	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	1	0	0	0	Incomplete small to medium left valve in very poor condition, the shell having lost most of its external and some of its internal surface. The shell is extremely powdery with damage to all margins	0.007
2	2839	**2836**	2686	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	1	0	Abraded powdery fragment of shell	0.001

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
2	2839	**2836**	2686	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	1	0	0	One small to medium near-complete right valve, damaged on the ventral edge and having suffered minor amounts of surface loss, resulting in the shell being slightly powdery. The hinge is relatively thick and indicates some age to the shell	0.019
2	2843	**2836**	2686	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	2	0	Two fragments of powdery oyster shell	0.006
2	2845	**3146**	2686	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	1	0	0	Near-complete small to medium right valve with some damage to the ventral margin which is probably post-depositional. There is some loss of the internal surface and the shell is slightly powdery	0.008
2	3053	**3052**	2686	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	1	0	0	Near-complete medium right valve, which has lost much of the ventral margin. There has been some surface loss both internally and externally and the shell is powdery	0.028
2	3053	**3052**	2686	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	2	0	0	0	Near-complete medium left valve with damage to the posterior and ventral margins and some surface loss, both internally and externally. The shell is therefore relatively powdery. Incomplete small to medium left valve with minor damage to the ventral edge and a possible shucking mark on the anterior margin. The shell is in very poor condition, having lost its entire outer surface and also much of its inner surface and is extremely powdery. Therefore, it is uncertain if the damage is a shucking mark or post-depositional damage	0.028

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
2	4013	**4008**	4008	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	1	0	Fragment missing from the assemblage so described as indeterminate.	0.012
3	3054	**3274**	3093	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	4	0	0	One near-complete medium right valve in relatively good condition, with a moderately thick shell, indicating some age. Minor damage to the anterior margin, where the shell has become slightly powdery. The external surfaces are in good condition, with some survival of horny scale and some marine worm boring damage on the dorsal margin. Near-complete right valve with damage to the ventral margin, otherwise in good condition. Externally, some survival of horny scale. Incomplete small to medium right valve, with damage along almost all of the margins and some loss of internal surface, resulting in the shell becoming very powdery. Both the internal and external surfaces have patches of *Bryozoa* or sea mat towards the dorsal margin. Large fragment of right valve, the dorsal margin and part of dorsal-anterior margin survive. Most of the posterior margin and the ventral margin have been lost, as has much of the external surface of the shell, which is, as a result, very powdery	0.044
3	3054	**3274**	3093	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	5	0	0	0	One medium to large near-complete left valve, with some damage to the ventral margin and some internal surface loss. Externally, there is moderate marine worm boring damage and internally, there are several bored holes or burrows, possibly caused by predatory	0.096

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
											marine gastropods. These do not perforate the shell but their position on the inside of the valve, alongside the shell of a young oyster, suggests the shell may not have contained an oyster when it was collected. One medium to large incomplete left valve, damaged on the ventral and anterior margins, with some surface loss to the upper part of the shell. Two medium incomplete left valves, both damaged on the ventral margin, one is extremely powdery having lost most of its upper surface and some of its inner surface. The second shell is more robust but has undergone some damage to the internal surface. One near-complete small to medium left valve, in relatively poor condition, with damage to the ventral margin and surface loss at the dorsal margin and the internal surface, resulting in the shell being very powdery	
3	3081	**3251**	3093	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	1	0	0	Incomplete right valve, having lost the entirety of its ventral margin and also having suffered damage on the dorsal-anterior margin. There has been some surface loss, especially internally, and as a result shell is powdery	0.004
3	3096	**3093**	3093	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	1	0	Fragment of shell that has lost both outer and inner surfaces and almost all of its margins, although a small area of the dorsal margin remains	0.003
3	3262	**3258**	3093	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	27	0	0	1	Medium near-complete left valve, with some damage to the ventral and anterior margin; the shell is somewhat flaky and soft. A single medium near-complete left valve that has	0.114

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
											lost almost all of its upper and quite a lot of its lower surface, resulting in a very soft and flaky shell. On the posterior margin is a large, rounded notch which may be the remains of a shucking mark, however, the general poor condition of the shell makes this uncertain. Two incomplete left valves, both badly damaged on anterior and posterior margins, with some damage to the ventral margin. The shells are in poor condition, flaking and powdery. Six incomplete small left valves, all damaged on the ventral edge and some with damage on the anterior and posterior margins. One shell has minor marine worm boring damage - this particular shell is relatively thick and old. Only the dorsal margin survives on a second shell, which also bears traces of colour in the banding. Internally, this shell has a large area of *Bryozoa* or sea mat and there is some internal marine worm boring damage, suggesting the shell was already split and open at the point of which it was recovered. Eight fragments from left valves. All are heavily damaged, powdery and flaking, one is from relatively thick older shell, and one fragment bears moderate damage caused by marine worm boring Nine fragments from left valves. All are heavily damaged flaking, soft and powdery. One fragment is from a thick, older shell and a single fragment bears moderate damage from marine worm borings	

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
3	3262	**3258**	3093	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	6	0	0	Incomplete small to medium right valve, missing the entirety of the ventral margin, with damage continuing onto the anterior margin; the shell is soft and flaky. Near-complete small right valve with minor damage on the anterior and posterior margins. Slight traces of colouring survive on the upper surface and, as with almost all of the shells from this site, it is somewhat soft and flaking. Two incomplete small right valves, with considerable damage to the margins, both shells are soft and flaky, but both also have some horny scale surviving. Two fragments of right valve in very poor condition	0.029
3	3262	**3258**	3093	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	8	0	Eight abraded fragments of soft powdery shell and numerous flakes of shell, all are very soft and flaky and dusty	0.021
4	2203	**0**	2007	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	1	0	Small powdery incomplete fragment of shell	0.002
5	2728	**2727**	2560	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	2	0	0	Two fragments of right valve that have lost some of the upper surface and all of their inner surface, resulting in being extremely powdery	0.007
5	2728	**2727**	2560	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	1	0	0	0	Powdery fragment of left valve having lost all its surfaces, in very poor condition	0.002
5	2728	**2727**	2560	Oyster	*Ostrea edulis*	Estuarine and shallow coastal water	0	0	3	0	Small powdery fragments of shell in very poor condition	0.001

Phase	Context	Cut	Group	Common Name	Species	Habitat	No. left valves or fragments of valve	No. right valves or fragments of valve	No. of indeterminate shells	No. of shucked shells	Description/Comment	Total Weight (kg)
Totals:							**198**	**124**	**334**	**2**		**3.461**

Table 47: Shell catalogue

APPENDIX D HEALTH AND SAFETY

D.1.1 All OA post-excavation work will be carried out under relevant Health and Safety legislation, including the Health and Safety at Work Act (1974). A copy of the Health and Safety Policy can be supplied. The nature of the work means that the requirements of the following legislation are particularly relevant:

- Workplace (Health, Safety and Welfare) Regulations 1992 – offices and finds processing areas
- Manual Handling Operations Regulations (1992) – transport: bulk finds and samples
- Health and Safety (Display Screen Equipment) Regulations (1992) – use of computers for word-processing and database work
- COSSH (1988) – finds conservation and environmental processing/analysis

APPENDIX E OASIS REPORT FORM

Project Details

OASIS Number	oxfordar3-416966
Project Name	Grange Paddocks leisure centre

Start of Fieldwork	07/10/2019	End of Fieldwork	18/12/2019
Previous Work	Yes	Future Work	Yes

Project Reference Codes

Site Code	XHTGAP19	Planning App. Number	3/18/0006/PREAPP
HER Number		Related Numbers	BISHM 2019.97

Prompt	National Planning Policy Framework (NPPF)
Development Type	Public Building

Techniques used (tick all that apply)

☒	Aerial Photography – interpretation	☒	Open-area excavation	☐	Salvage Record
☐	Aerial Photography - new	☐	Part Excavation	☐	Systematic Field Walking
☐	Field Observation	☐	Part Survey	☐	Systematic Metal Detector Survey
☐	Full Excavation	☐	Recorded Observation	☐	Test-pit Survey
☐	Full Survey	☐	Remote Operated Vehicle Survey	☒	Watching Brief
☐	Geophysical Survey	☐	Salvage Excavation		

Monument	Period
SFB	Roman (43 to 410)
Ditch	Roman (43 to 410)
Pit	Roman (43 to 410)
Posthole	Roman (43 to 410)
Buried soil	Roman (43 to 410)
Burial	Roman (43 to 410)
Road	Roman (43 to 410)
Trackway	Roman (43 to 410)

Object	Period
Pottery	Roman (43 to 410)
Metalwork	Roman (43 to 410)
Animal remains	Roman (43 to 410)
CBM	Roman (43 to 410)
Glass	Roman (43 to 410)
Shell	Roman (43 to 410)
HSR	Roman (43 to 410)
Metalworking debris	Roman (43 to 410)
Worked stone	Roman (43 to 410)
Flint	Mesolithic (- 10 000 to - 4000)

Project Location

County	Hertfordshire
District	East Hertfordshire
Parish	Bishop's Stortford
HER office	Hertfordshire
Size of Study Area	0.7ha
National Grid Ref	TL 4893 2199

Address (including Postcode)

Grange Paddocks Leisure Centre, Rye Street, Bishop's Stortford, CM23 2HH

Project Originators

Organisation	OA East

Project Brief Originator	Alison Tinniswood (HHET)
Project Design Originator	James Drummond-Murray (OA East)
Project Manager	Stephen Macaulay (OA East)
Project Supervisor	Andrew Greef (OA East)

Project Archives

	Location	ID
Physical Archive (Finds)	Bishop's Stortford museum	BISHM 2019.97
Digital Archive	OA East Office	XHTGAP19
Paper Archive	Bishop's Stortford museum	BISHM 2019.97

Physical Contents	Present?	Digital files associated with Finds	Paperwork associated with Finds
Animal Bones	☒	☐	☐
Ceramics	☒	☐	☐
Environmental	☒	☐	☐
Glass	☒	☐	☐
Human Remains	☒	☐	☒
Industrial	☒	☐	☐
Leather	☐	☐	☐
Metal	☒	☐	☒
Stratigraphic		☐	☐
Survey		☒	☐
Textiles	☐	☐	☐
Wood	☐	☐	☐
Worked Bone	☒	☐	☐
Worked Stone/Lithic	☒	☐	☐
None	☐	☐	☐
Other	☒	☐	☐

Digital Media		Paper Media	
Database	☒	Aerial Photos	☐
GIS	☒	Context Sheets	☒
Geophysics	☐	Correspondence	☐
Images (Digital photos)	☒	Diary	☐
Illustrations (Figures/Plates)	☒	Drawing	☒
Moving Image	☐	Manuscript	☐
Spreadsheets	☐	Map	☐
Survey	☒	Matrices	☒
Text	☒	Microfiche	☐
Virtual Reality	☐	Miscellaneous	☐
		Research/Notes	☐
		Photos (negatives/prints/slides)	☐
		Plans	☐
		Report	☒
		Sections	☒
		Survey	☐

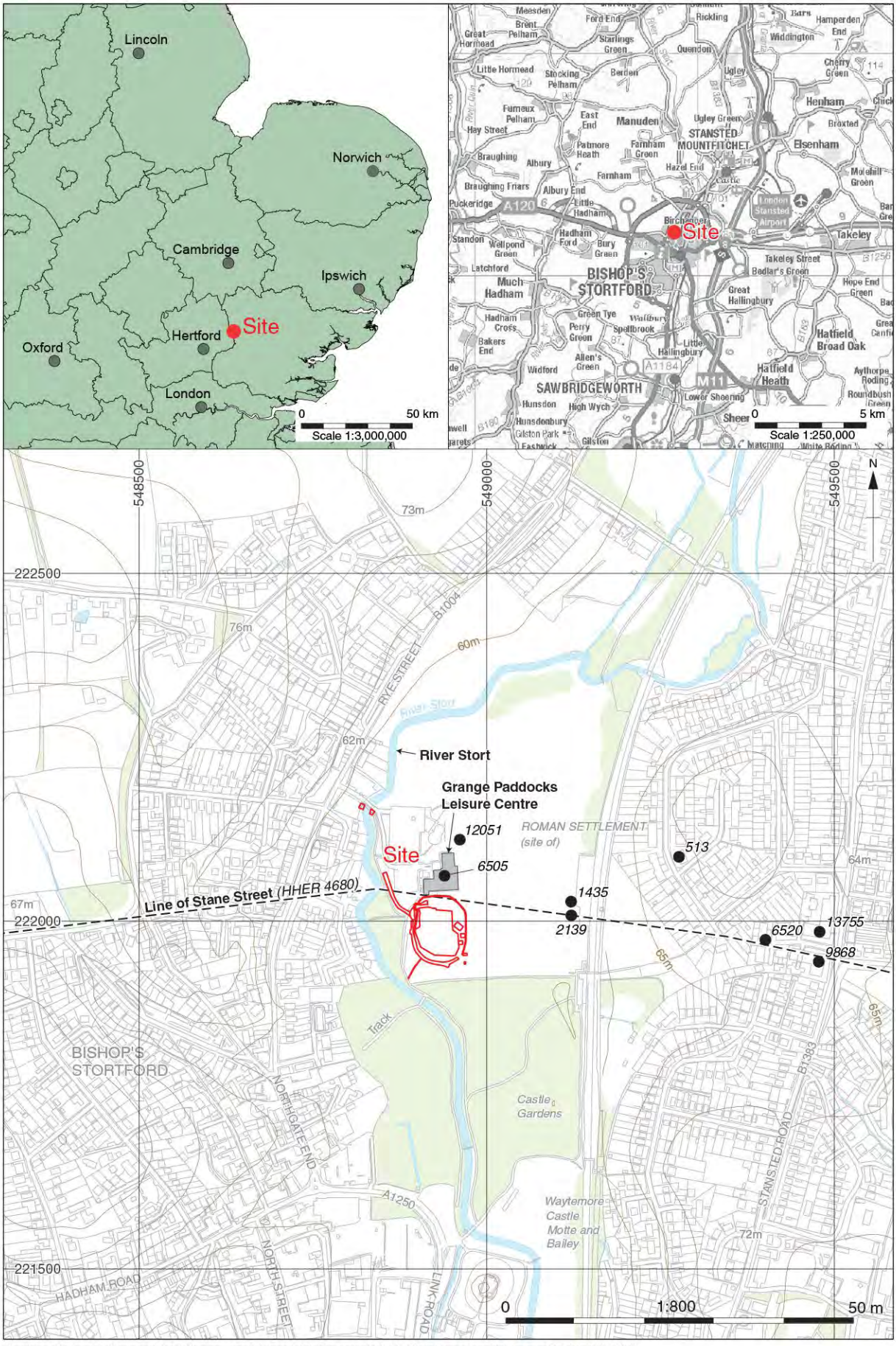

Figure 1: Site location with projected line of Stane Street and relevant local HER entries

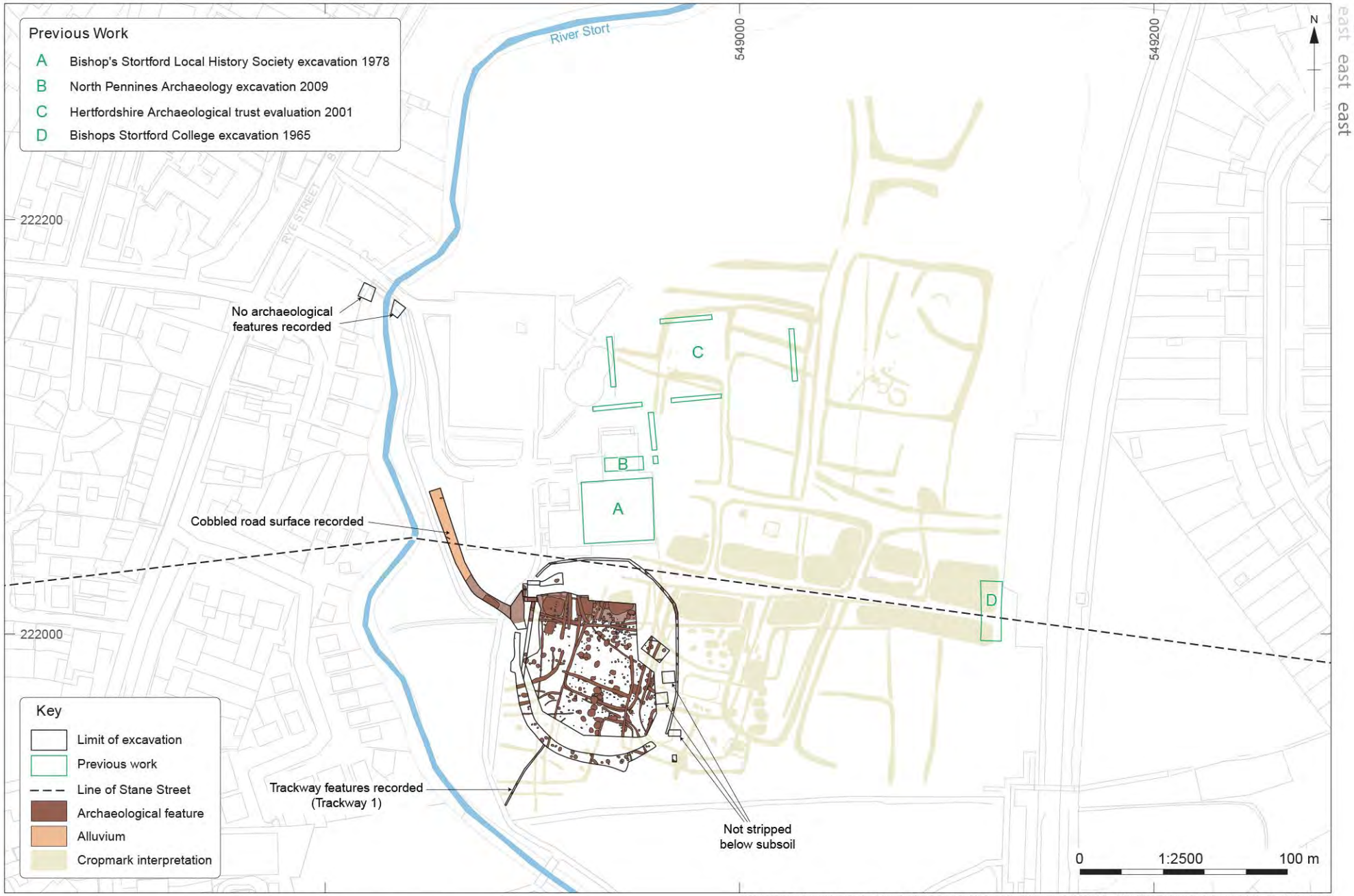

Figure 2: Grange Paddocks environs with previous work and cropmarks

Figure 3.1: Phase 1: Mid 1st to 2nd century AD

Figure 3.2: Phase 2: 2nd century AD

Figure 3.3: Phase 3: 2nd to 3rd century AD

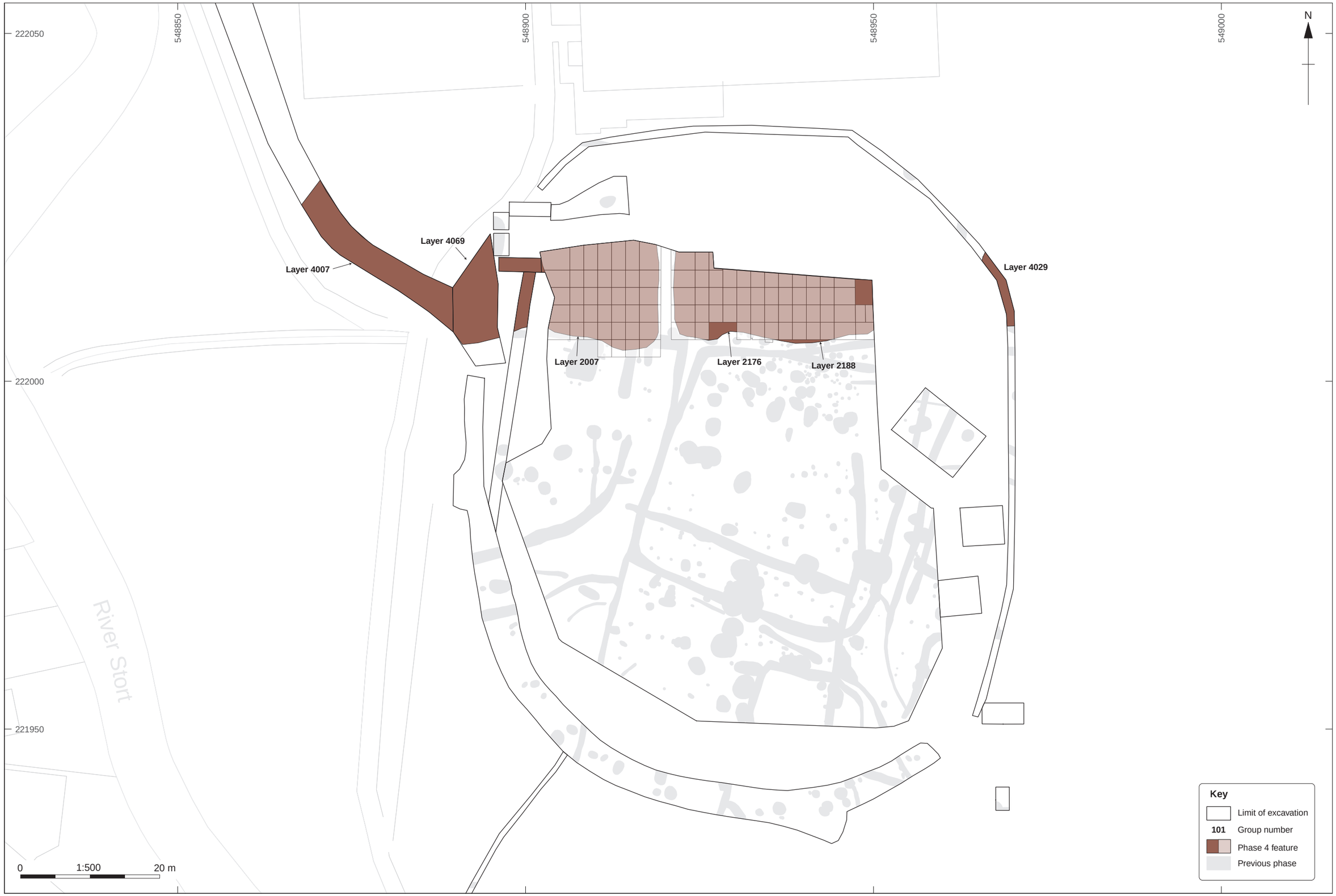

Figure 3.4: Phase 4: 3rd century AD

Figure 3.5: Phase 5: 3rd to mid 4th century AD

Figure 3.6: Phase 6: 4th century AD

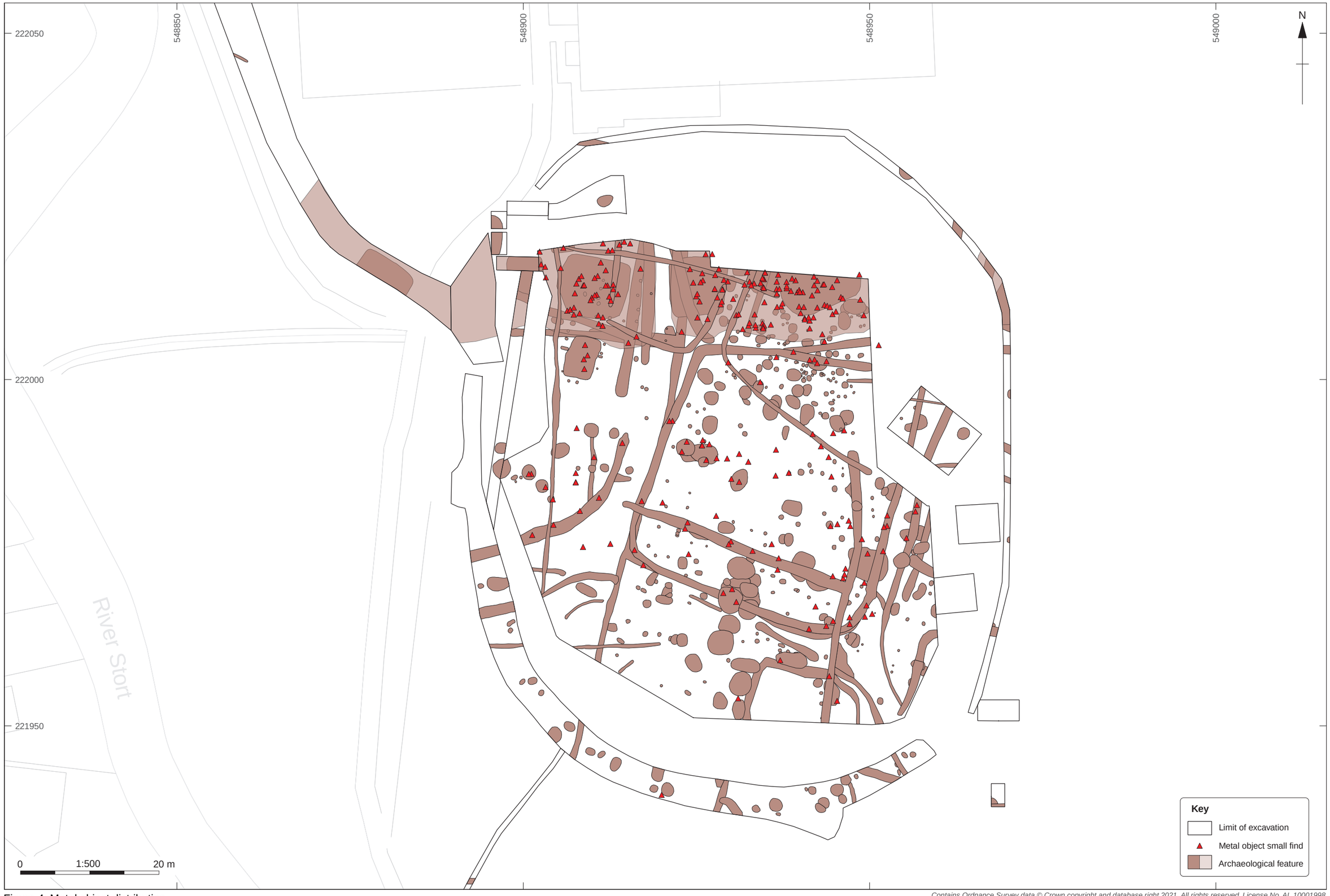

Figure 4: Metal object distribution

Plate 1: Site pre excavation from the south

Plate 2: Roadside area initial investigations

Plate 3: Final site photo (from the east)

Plate 4: Post ex photogrammetry image

Plate 5: Intervention **3247** (SFB **2168**, Phase 1) from the west

Plate 6: Pit **2109** (Phase 1) from the east

Plate 7: Part of Post structure **2326** (Phase 1) from the south

Plate 8: Ditch **2014** (Phase 2) from the northeast

Plate 9: SFB **2246** (Phase 2) mid excavation from the southwest

Plate 10: Quadrant **2504** (SFB 2246, Phase 2) from the southeast

Plate 11: Quadrant **2504** (SFB 2246, Phase 2) from the east

Plate 12: SFB **2246** (Phase 2) from the southwest

Plate 13: Pit **4008** (Watching brief, Phase 2) from the northeast

Plate 14: SFB **2686** (Phase 2) from the northwest

Plate 15: Fill sequence in Intervention **2836 (**SFB 2686, Phase 2) from the south

Plate 16: Neonate **2172** (Within SFB 2686, Phase 2) from the north

Plate 17: Pit **2350** (Phase 2) from the east

Plate 18: Ditch **2012** (Phase 2) mid excavation from the east

Plate 19: Ditch **2012** (Phase 2) excavated from the west

Plate 20: Pit **2037** (Phase 2) mid excavation from the southeast

Plate 21: Pit **2037** (Phase 2) from the southwest

Plate 22: Pit **2579** (Pit Group 2037, Phase 2) from the south

Plate 23: Pit **2579** lower step (Pit Group 2037, Phase 2) from the east

Plate 24: Pit **2057** (Phase 2) from the west

Plate 25: Base of oven in top of pit **2677** (Group 2057, Phase 2) from the south

Plate 26: SFB **3093** (Phase 3) mid excavation from the east

Plate 27: Clay layers in Intervention **3251** (SFB 3093, Phase 3) from the west

Plate 28: Intervention **3251** (SFB 3093, Phase 3) from the west

Plate 29: Neonate **3082** and **3083** (Within SFB 3093, Phase 3) from the east

Plate 30: Intervention **3258** (SFB 3093, Phase 3) from the northeast

Plate 31: SF127- Iron chisel conservation photo

Plate 32: SF268- copper alloy apron terminal conservation photo

Plate 33: SF309- copper alloy coin conservation photo

Plate 34: SF640- copper alloy coin conservation photo

Plate 35: Iron leatherworking punch conservation photo

Plate 36: Copper alloy coin selection

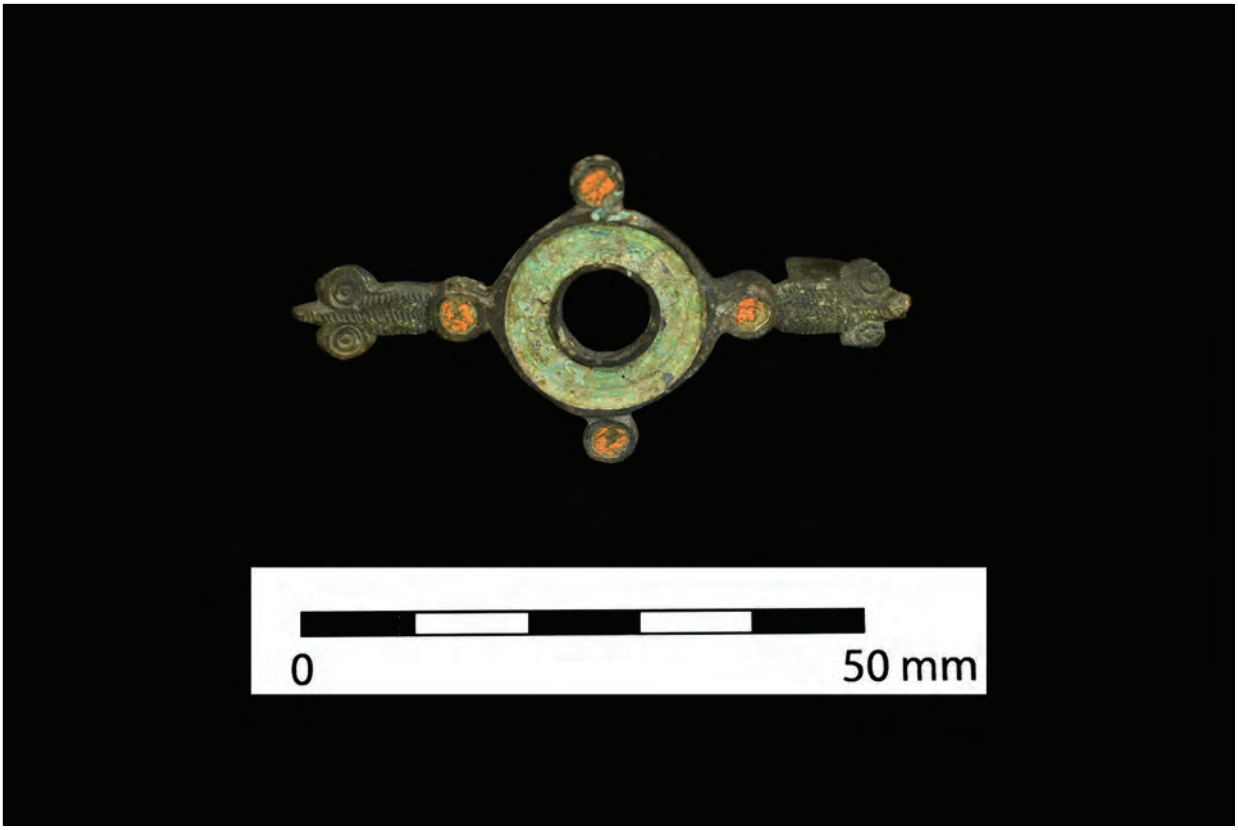

Plate 37: SF170- enamelled copper alloy plate brooch

Plate 38: SF228- enamelled copper alloy disc brooch

Plate 39: SF254- copper alloy brooch

Plate 40: SF301- copper alloy brooch

Plate 41: SF454- copper alloy brooch

Plate 42: SF461- copper alloy brooch

Plate 43: SF207- copper alloy finger ring with glass inset

Plate 44: Various copper alloy hairpins

Plate 45: Various copper alloy toiletry items

Plate 46: SF214- embossed belt plate (copper alloy)

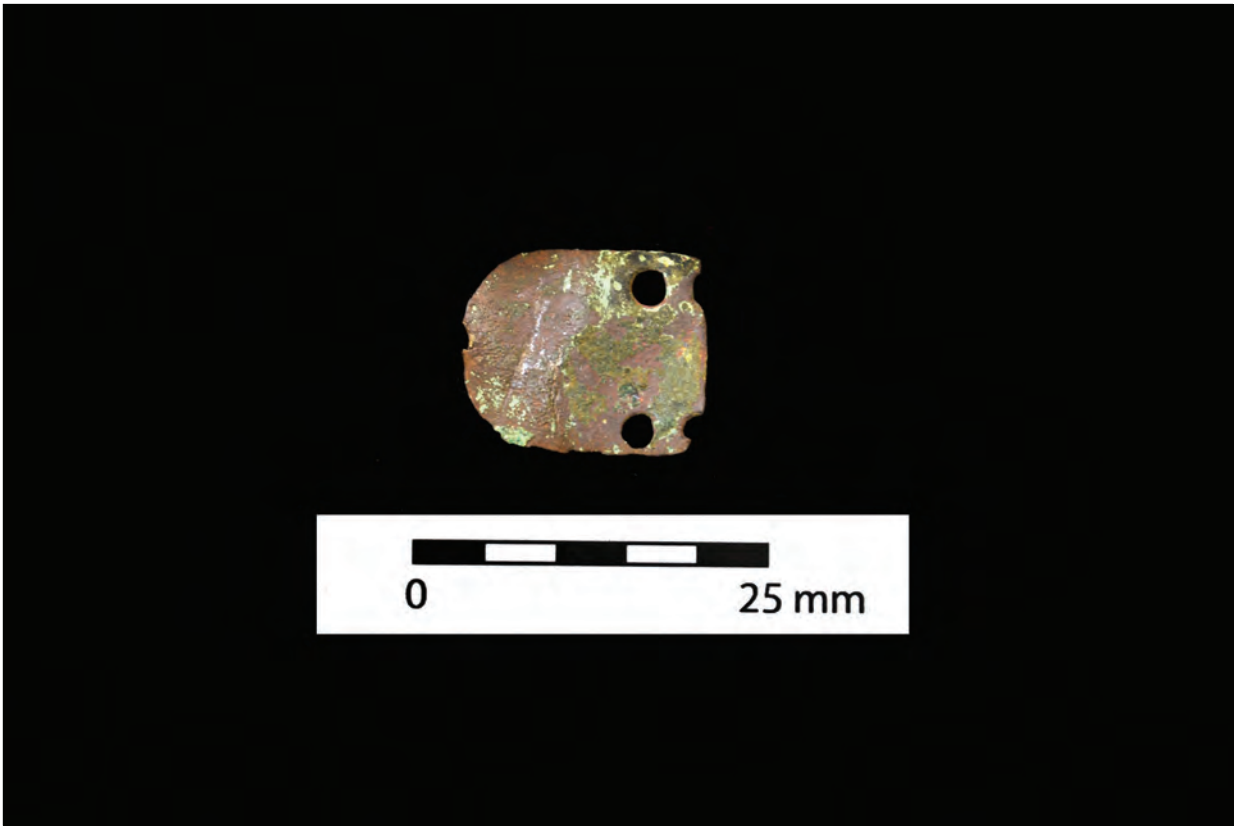

Plate 47: SF239- scale mail scale (lorica squamata)

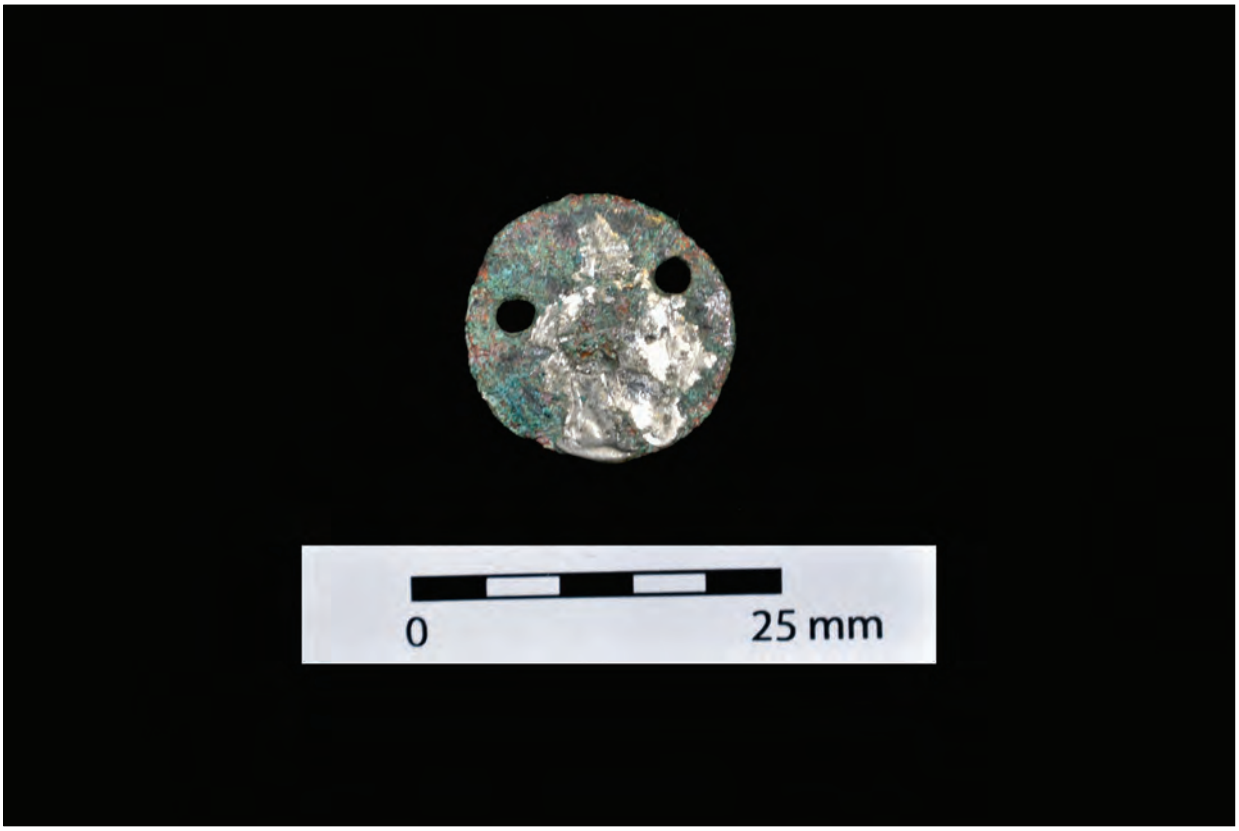

Plate 48: SF494- silver coin with perforations

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