

Gill Mill,
Ducklington &
South Leigh,
Oxfordshire



Post Excavation Assessment
and Project Design



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Gill Mill, Ducklington and South Leigh, Oxfordshire

Post-excavation assessment and project design

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Summary

A programme of archaeological examination at Smith and Sons (Bletchington) Ltd Gill Mill gravel quarry, located in the lower Windrush valley near Witney, Oxfordshire, commenced in 1988 and is still ongoing, the work falling into two parts (Phase 1, DUGM and Phase 2, SLGM) undertaken under different planning conditions. The present assessment report considers the archaeological record for both phases of work and presents a summary of it, with proposals for further analysis and reporting work to result in a publication. The significance of the site lies in two main aspects: the scale of examination and the character of the archaeological features revealed. The Phase 1 works have covered a total of c 68 ha (of which c 17 ha have been stripped and recorded under 'watching brief' conditions and the remainder examined by trenching), while in Phase 2 some 35 ha have been examined to date, using a strip, map and sample approach.

The earliest significant features revealed belong to the middle Iron Age – with four small discrete clusters of features, three of which may represent occupation, perhaps seasonal in nature. Limited late Iron Age-early Roman activity lay adjacent to one of these foci. A totally new nucleated settlement was established in the valley bottom in the early 2nd century AD. Covering at least 10 hectares (the central part of which lies beneath the present Gill Mill House) the settlement was laid out around paved roads running across and along the valley. The settlement plan was characterised by ditched enclosures containing a variety of structural and other evidence. In total parts of four stone buildings have been revealed (two totally excavated), although other structures are less easily identified. Rare high status structural elements are suggested by small quantities of flue tile and tesserae. Large numbers of pits are present in parts of the site, and waterlogged or partly waterlogged material has survived in some of these. Cremation and inhumation burials are mainly scattered around the margin of the settlement; amongst these a mid 2nd-century inhumation within a wooden chamber beneath a ditched mound is of exceptional importance for the region.

A range of biological evidence reveals an environment of damp grassland and the economy of the settlement is likely to have been heavily biased towards cattle rearing and marketing. The site has produced a large and important animal bone assemblage, while the principal artefactual component is formed by the pottery, one of the largest assemblages ever excavated in the region. There is also a large and important assemblage of some 960 coins. Other artefact categories are generally modest in size, but amongst these the ironwork indicates an unusual emphasis on transport, with relatively numerous vehicle fittings supplemented by the very rare survival of part of a waterlogged cart wheel. There is also an important group of religious material, including carved stone pieces, ceramic Venus figurines and perhaps other associated objects. Together these suggest the existence of a significant shrine, probably located within the focal area of the settlement. Environmental preservation within the pits and other features is variable, but finds include wooden objects and part of a basket of finely-woven plant fibre.

The coin and pottery evidence is consistent in suggesting that occupation of the settlement came to an end c AD 370, rather before the end of the Roman period. The reasons for this are uncertain at present. The site was clearly of major importance in the local settlement pattern, and various models for its role within that settlement pattern, such as market centre or estate centre, can be tested by further analysis, including detailed consideration of plant, animal bone and ceramic assemblages to establish the nature of economic activity at the site. The topographical setting is most unusual in regional (and indeed national) terms, particularly considering the scale of the settlement. The combination of all these factors makes this an exceptionally important site and the proposed programme of further analysis and reporting work outlined here and intended to result in a significant publication, reflects the importance of the complementary evidence of the two main phases of work at Gill Mill.

1 DESCRIPTION OF THE PROJECT

1.1 Background

- 1.1.1 This post-excavation assessment report relates to the results of a programme of archaeological work - evaluation, watching brief and excavation - carried out at Smith and Sons (Bletchington) Ltd gravel quarry at Gill Mill, in the parishes of Ducklington, South Leigh and Hardwick-with-Yelford, Oxfordshire (Fig. 1), and has been produced by Oxford Archaeology (OA, previously the Oxford Archaeological Unit)) in discussion with Smith and Sons, Oxfordshire County Council and English Heritage. It is arranged in accordance with English Heritage guidelines (English Heritage 2006).
- 1.1.2 Archaeological work at this large gravel quarry site, run by Smith and Sons (Bletchington) Ltd, has been undertaken by Oxford Archaeology at various times from 1988 to the present (Fig. 2). It falls into two main blocks: work from 1988-1999 in the north-western half of the quarry, undertaken under the terms of a pre-PPG16 planning consent (Phase 1), and work from 2001 to the present in the south-eastern part of the quarry, undertaken under the terms of a PPG16 planning consent (Phase 2). The area covered by the two phases of work is very substantial (see further below) but the Phase 2 work, in particular, has involved extensive excavation. The present assessment report on the Phase 2 work has been funded by the developer in line with the terms of the relevant planning condition (it should be noted that the costs of archaeological work in Phase 2 are split between Smiths and the owners of the block of land in question, the Stanton Harcourt Estate). At the same time, a proposal (OA 2009) for a parallel assessment of the more disparate stages of work undertaken in Phase 1, on the basis that it was desirable to treat the whole quarry area as a single entity (and that parts of the principal Roman settlement - see below - lie in both Phase 1 and Phase 2 areas) was accepted by English Heritage. This work has been funded with money from the Aggregates Levy Sustainability Fund.
- 1.1.3 The development of the quarry over a period of more than 20 years is inevitably complex. It has fallen into two main components: Phases 1 and 2, also referred to here for convenience (as reflected by site codes) as DUGM (Ducklington Gill Mill) and SLGM (South Leigh Gill Mill) respectively. The division of the site between these parishes is, however, rather less straightforward than this usage would suggest (for example Areas 1, 2 and 3 of Phase 1 actually lie within the parish of Hardwick-with-Yelford, and Gill Mill itself, now within South Leigh parish, was historically in the parish of Cogges, which was dissolved in 1932; Crossley 1990, 54). The component stages of this work are summarised in Table 1 below in terms of the different areas within each of the two main phases of quarry development (noting that similar sequences of area numbers have been used in both phases). In the north-western half of the quarry (Phase 1) work under the terms of the pre-PPG16 planning condition was undertaken mainly between 1988 and 1999, but occasional pieces of work in the Reserve Area (Area 13), subject to the same permission, have been carried out from time to time since then, including most recently in 2010. The Phase 1 works have covered a total of c 68 ha, of which c 17 ha have been stripped and recorded under 'watching brief' conditions and most of the remainder examined by trenching. The Phase 2 archaeological works, under a new (post-PPG16) planning consent, cover an area south-east of Phase 1 (the two phases being divided by the present Gill Mill House complex and the access road to it, except for the 2001 Working Area, which lies west of the access road), in Tar Farm and Rushy Common (Fig. 2). These works commenced in 2001 and are potentially ongoing as parts of Tar Farm remain to be extracted. An area of some 44 ha has been examined to

date, using a strip, map and sample approach. It should be noted that the present assessment report does not cover the majority of the work in the Phase 1 Reserve Area (13), although some of the results of this work are referred to in passing, nor does it take any account of the most recent Phase 2 work, in Area 6. These will be subject to assessment, and further work if necessary, at a later stage.

- 1.1.4 The evaluation trenching in Phase 1 was carried out in line with a scheme of work agreed with Oxfordshire County Council. Subsequent work (eg in Phase 1 Areas 4 and 9) took the form of a watching brief on removal of topsoil and subsoil, with an emphasis on the mapping of archaeological features. The associated sampling of mapped features was therefore at a low level, although in Area 13, examined more recently, the approach has been in line with that adopted for the Phase 2 works. In the Phase 2 areas, examined under a separate planning condition (see above), a distinct stage of evaluation trenching was dispensed with and each component area was subject to a strip, map and sample approach. This involved removal of topsoil and alluvial subsoil layers (where present) by machine under archaeological supervision, prior to mapping and hand excavation of an appropriate sample of the exposed features in line with the terms of a written scheme of investigation agreed with Oxfordshire County Council and advice from the Deputy County Archaeologist.
- 1.1.5 Excavation and recording methodologies followed standard OA procedures, but inevitably these have evolved in the course of the period of more than 20 years of archaeological involvement with the Gill Mill Quarry. Current practice, based on that originally defined in an *Oxford Archaeological Unit Fieldwork Manual* edited by David Wilkinson in 1992 (but subsequently updated), is in line with the relevant IfA fieldwork standards. Some of the most significant differences relate to numbering schemes. All the work since 2001 has been carried out using a single context numbering system with successive blocks of context (and other record type) numbers assigned to each new area. This system was adopted in the early 1990s, and the numbering systems for the 1988 and 1989 evaluations, in particular, are quite confusing, since some they involved the use of general numbers as well as trench-specific sequences, and a system of letters and sub-numbers was used to define specific feature interventions and their component deposits. An attempt to rationalise these numbers has been made in the context database constructed for the present project, but this does result in very long numbers, and in the text presented here context numbering follows that of the original records.



Table 1: Summary of site areas

Area	Total extent (approx)	Evaluation	Further work	Site Code	(Contexts nos)	Context	Area examined	Comment
<i>PHASE 1 Gill Mill (DUGM)</i>								
1	5 ha	1988, 8 trenches	None	DUGM88	(24)		0.06 ha	
2	5 ha	1988, 18 trenches	none	DUGM88	(168)		0.114 ha	Area taken out of extraction programme
3	8 ha	1988, 13 trenches	None	DUGM88	(4)?		0.11 ha	
4 (/5)	8 ha	1989, 23 trenches	Partial excavation 1990	DUGM89, DUGM90	3000-3532 (but only c 110 sheets)		0.063 ha + 1.85 ha	Area 5 label not used in archaeological recording
6, 7 (SW)	3.7 ha	1993, 10 trenches	None	DUGM93	(416)		0.045 ha	SW part of Areas 6 & 7
6, 7 & 8 (NE)	10 ha	1995, 28 trenches	Three very small areas excavated 1995	DUGM95	(366)		0.151 ha + 0.128 ha	NE part of Areas 6-8
9	6.8 ha	1997, 22 trenches	Watching brief 1997-9	DUGM97, DUGM98, DUGM99	(300) + 1-2304		6.5 ha	
10	6 ha	1989, 23 trenches	Two small areas excavated, 1990	DUGM90	(96) + 1001-1024, 2000-2051		0.107 ha + 0.206 ha	
13 - Reserve Area	8.5 ha to date	none	Phased SMS, 2000, 2001, 2003, 2007, 2008*, 2010	DUGM00, DUGM01, DUGM03, (SL)GM07, DUGM08, *DUGM10	1-90, 100-150, 11000-11055, 11500-11600, * 16000-16878		8.5 ha	SLGM07 in error, 2008* drainage trench SW of main area
16 - Plant Area	3.6 ha	1988, 9 trenches	Limited watching brief 1988	DUGM88	(144)		0.063 ha	
17 - Silt Pond	3.7 ha	1988, 3 trenches	None	DUGM88	(32)		0.036 ha	
TOTAL					c 4835		c 17.9 ha	
<i>PHASE 2 Rushy Common and Tar Farm (SLGM)</i>								
Working Area	4 ha	none	SMS 2001	DUGM01	200-253		3.9 ha	



Area	Total extent (approx)	Evaluation	Further work	Site Code	(Contexts) Context nos	Area examined	Comment
Area 1	8.5 ha	none	SMS 2001, 2002	SLGM02	254-265	8.1 ha	
Area 2	11 ha	none	SMS 2002-2003	SLGM03	1-177* 1000-1061	10.6	
Area 3	7 ha	none	SMS 2004-2006	SLGM04, SLGM05, SLGM06	4000-4194, 4350- 4380, 5000-5195	6.2 ha	Five phases. Includes W end of conveyor between Areas 3 & 4
Enabling Works		none	SMS May 2004	SLGM04	4195-4349	0.7 ha	Head of conveyor east of Area 4
Area 4	6.5 ha	none	SMS 2005-2008	SLGM05, SLGM06	4381-4847, 5200-5334, 5400- 10950, 13000- 13298	6.25 ha	Multiple phases of work
Area 5	5.8 ha	none	SMS 2007, 2008, 2010	SLGM07, SLGM09, SLGM10	12000-12422, 12500-12999, 14000-14096	5.6 ha	
Area 6	2.8 ha	none	SMS 2009, 2010	SLGM09, SLGM10	15000-15564	2.6 ha	
TOTAL					c 9325	c 44 ha	

WB = watching brief

SMS = strip, map and sample

Numbering of Phase 1 (Gill Mill) Areas as on 1986 outline plan. Subsequent renumbering is not implemented here.

Numbering of Phase 2 (Rushy Common and Tar Farm) Areas as in current quarry programme.

Archaeological background

- 1.1.6 The geological setting is the gravel of the lower Windrush valley, the First (Northmoor or Floodplain) Terrace of the Thames Valley system (IGS 1982). These gravels overlie Oxford Clay. The archaeological deposits in the valley bottom are typically overlaid by alluvium, often forming a subsoil up to 0.2-0.3 m thick, although this varies quite considerably; the relatively widespread alluvial deposits shown on the geological mapping at this point are generally very superficial above the gravel. The topography of the site area is level, typically at about 70-72 m aOD, dissected by the two main channels of the Windrush and by a number of subsidiary streams, of which the Hardwick Brook and the Standlake Brook are the most important (Fig. 1). Immediately beyond the confines of the valley bottom the ground rises slightly to the south-west and to the north-east. This is most particularly apparent east of Cogges Lane in the direction of Tar Farm.
- 1.1.7 In broad terms the archaeological background to the site is that of the Upper Thames Valley gravels (for recent summaries see Booth *et al.* 2007; Lambrick 2009; Hey *et al.* forthcoming), although this part of the Windrush valley is, with the exception of Gill Mill itself, less well known than adjacent areas further downstream, although the area immediately north-west of the present quarry has been the subject of a recent desk-based assessment (Wallis 2010). There is relatively little evidence for activity of earlier prehistoric periods, though three probable ring ditches, of likely Bronze Age date, appear as cropmarks just to the north of the present quarry limit. Only tiny quantities of prehistoric flintwork have been recovered from the Gill Mill works. The major Neolithic henge complex of Devils Quoits (Grimes 1960, 140-170; Barclay *et al.* 1995) lies only c 4 km south-east of Gill Mill on the wide gravel terrace that extends south and west of Stanton Harcourt. This area contains abundant further evidence for Neolithic and Bronze Age features, particularly round barrows (eg Grimes 1943-1944; Case 1982; Linington 1982, with the closest excavated features of this type at Gravelly Guy, only just over 3 km from Gill Mill (Lambrick and Allen 2004), while additional concentrations of ring ditches occur at Standlake on the right bank of the Windrush (eg Catling 1982) only 2-2.5 km south of Gill Mill.
- 1.1.8 Gravelly Guy is also important as the most extensively excavated of numerous Iron Age settlements that concentrated around the edges of the gravel terrace in this area, for which Lambrick has proposed a complex evolutionary sequence of settlement and ritual activity (Lambrick and Allen 2004, 479-492). This settlement relates to the Second Gravel Terrace, while 5 km north-west of Gill Mill part of an unenclosed middle Iron Age settlement on the higher Kellaway Clay and Sand at Witney (Walker 1995) is the only excavated site of this period reasonably close by in the area north of Gill Mill. As with the small foci of middle Iron Age activity at Gill Mill, however, there is other evidence for settlement on the floodplain of the Windrush as well as on the Second Terrace. This is seen most clearly at Mingies Ditch, an enclosed settlement lying only 1.5 km down the valley from Gill Mill (Allen and Robinson 1993). Occupation here seems to have been exclusively of middle Iron Age date, but a late Iron Age-early Roman settlement at Smiths Field (Booth *et al.* 2007, 206, 225) less than 200 m to the west was probably a successor to the Mingies Ditch site. Further late Iron Age occupation was revealed on the Hardwick Bypass exactly 1 km south of Gill Mill (Chambers and Williams 1976) and also north-west of Ducklington (Chambers 1976). Both sites lie on the slightly elevated valley slopes. Occupation at Hardwick may have continued as

late as the early 4th century. A site on the Ducklington bypass, a little over 1.5 km WNW of Gill Mill and again on the valley side was also occupied in the middle-later Roman period (with no evidence of early Roman activity), as well as producing an Anglo-Saxon burial of 7th century date (Chambers 1975). This site, first identified from the air and subject to very limited excavation, may have been quite substantial. With this exception, excavated evidence for later Roman and subsequent periods is, as before, much more scarce north of Gill Mill than in the areas adjacent to the south, largely because of the concentration of archaeological work in the context of gravel extraction. Extensive cropmark evidence for rural settlement of probable later prehistoric and Roman date occurs as close as Yelford, where significant cropmark complexes (and 'substantial quantities of RB pottery') lie only 2 km south-west of Gill Mill (eg Benson and Miles 1974, 42-43 and pl. 4).

- 1.1.9 While the minor Roman roads revealed at Gill Mill, and the trackways and other settlement elements (known mostly from the air, but see eg McGavin 1980) seen in the Stanton Harcourt area, indicate a densely organised rural settlement pattern, the major regional element of Roman infrastructure is Akeman Street, which lies at its closest point some 8 km NNW of Gill Mill. This road supported a number of larger nucleated settlements, of which Wilcote and Asthall are the closest, but the higher ground across which it ran sustained a very different type of rural settlement pattern from that seen in the river valleys; one which on present evidence seems to have been dominated by villas. Amongst sites of this type Shakenoak has produced significant evidence for both very late Roman and early Saxon activity, but such evidence is uncommon in this area, although a late Roman (Hawkes IB) buckle is reportedly from South Leigh (PAS BERK-EB3477) and a fragment from a buckle plate of this type is noted from the Ducklington bypass site mentioned above (Chambers 1975, 180). The significance of the apparent paucity of early Saxon settlement in the lower Windrush/Thames confluence area remains unclear, but the certain absence of such settlement at Gill Mill is at present consistent with the wider picture. The evidence for Saxon burials in this area does, however, appear to be very largely of 7th century date rather than earlier (Booth et al. 2007, 419) and is thus also suggestive of a lack of early Saxon settlement. The medieval settlement pattern is largely reflected in the present disposition of villages (eg Crossley 1996, 114), although in parishes such as Cogges this tended to be more dispersed. Gill Mill itself, perhaps the mill recorded under Cogges in Domesday Book, was certainly later the manorial mill for the Manor of Cogges, and was known as Gold Mill by 1279. It ceased working in the early 19th century (Crossley 1990, 67).

1.2 Archaeological description

- 1.2.1 The programme of archaeological work exposed an extensive late prehistoric and Roman landscape. (Fig 3). Three discrete concentrations of middle Iron Age activity were identified, located in Phase 1 Area 10 and Phase 2 areas 3 and 4, and two early Roman ditched enclosures were situated near the eastern edge of Phase 2 Area 3, as well as a small number of associated features. The majority of the remains, however, comprised a major Roman nucleated settlement. The settlement was concentrated around the location of the current Gill Mill House, in Phase 1 areas 2, 4 and 9 and Phase 2 Areas 4 and 5 (Figs 3 and 4). Enclosures and field boundaries relating to the agricultural landscape around the settlement were recorded in the surrounding excavation areas. The settlement comprised ditched enclosures, buildings and associated features including pits, wells,

waterholes and burials. It was arranged around the junction of two principal roads: Road 1, which extended across the valley on a NE-SW orientation, and Road 2, which extended toward south-east from the central part of the settlement. Two minor roads or tracks branched off the north-eastern side of Road 2 within the settlement.

- 1.2.2 The following very condensed description treats the individual areas of the Phase 1 and Phase 2 works in turn. It is itself followed by a summary of the character and significance of the Gill Mill sites, which draws together the main characteristics of this very extensive and complex programme of fieldwork to present an overview, relating in particular to the major Roman settlement.

Phase 1 (DUGM)

Area 1 (Fig. 2)

- 1.2.3 Area 1 was situated at the south-western edge of the investigations. It encompassed a total area of 5.5 ha and comprised the northern half of a more extensive field. The area was defined to the north and east by Standlake Brook, to the west by a drainage ditch and to the south by a footpath that crossed the middle part of the field. A total of seven evaluation trenches were excavated, each measuring 45-50 m in length, and an additional, smaller Trench 8 was excavated at the eastern end of the area, adjacent to Standlake Brook. The part of the brook that bounded the edge of the area appears to have been straightened, and the aim of the latter trench was to establish when this was done by identifying and dating any deposits of upcast associated with the digging of the channel.
- 1.2.4 A ditch was recorded in Trench 3, and two ditches in Trench 6. No datable material was recovered from these features, but as they were sealed by alluvial layers they are likely to be of Roman date. The channels of former watercourses were identified in Trenches 1 and 5. Trench 8 revealed evidence for a ford of uncertain date, in the form of a spread of limestone rubble, but no evidence relating to the date of the straightening of Standlake Brook was identified.
- 1.2.5 Two layers of alluvium were recorded throughout the area. The lower alluvial layer varied in colour and thickness, and where thicker it became softer and graded into black organic peaty layers, where additional alluvial layers were added. Alluvial layer 2 overlay it and consisted of stiff buff brown clay. The alluvial deposits were generally devoid of any coarse material such as gravel or other stones, and yielded no artefactual material. Topsoil in this area was a dark brown silty slightly clay loam that measured 0.1-0.2 m thick. Finds from it were concentrated along the bank of Standlake Brook and were mainly post-medieval, although occasional medieval sherds were seen. Patches of gravel in the ploughsoil suggest localised dredging out of the brook, probably dating from the 19th century.

Area 2 (Fig. 5)

- 1.2.6 Area 2 was approximately rectangular in shape and was located in the southern part of the investigations, between Standlake Brook and the western channel of the River Windrush. It encompassed an area of c 5.3 ha and was subject to evaluation in 1988, when a total of 18 trenches and seven test pits were excavated. The field was in a ploughed, harrowed, slightly weathered condition immediately prior to trenching. The topsoil here is generally a dark grey brown clay loam. While setting out the trenches, scatters of Roman occupation debris were clearly seen on the surface in the form of elongated black patches with prolific

quantities of 3rd-4th century pottery and limestone rubble, as well as coins and iron nails.

- 1.2.7 The earliest features identified were a group of five plough scars in Trench 7. These features survived to a depth of no more than 0.03 m and could not be assigned a specific date, but may represent the only evidence thus far identified for pre-Roman landuse at Gill Mill.
- 1.2.8 The majority of the remains uncovered formed part of an area of intense occupation dating from the late Roman period, arrayed along a road (Road 1) that extended throughout the area on a NNE-SSW orientation (Fig. 3). The road, which was exposed in Trenches 1, 5, 9 and 13, had been constructed on a slight causeway of dumped clay and gravel up to 0.3 m high. The road surface itself was a worn cobble layer with deposits of gravel filling linear features that may have been cart ruts. A compacted gravel surface sealed beneath the causeway material in Trench 15, on which lay some pottery and animal bone, may have been an earlier phase of road surface. In Trenches 5 and 9 the road was flanked by a pair of roadside ditches (44, 45, 78 and 79), and the eastern ditch was also recorded in Trench 13 (44), although the western ditch and the western edge of the road itself lay beyond the end of this trench. No roadside ditches were identified in Trench 1, suggesting that these features may have been discontinuous rather than extending along the entire length of the road.
- 1.2.9 A raised oak walkway was erected along the western edge of the road. This structure was represented by two rows of piles driven into the road surface. Five piles of the western row were recorded in Trench 16, as well as a single pile of the eastern row. One pile from each row was exposed in Trench 1, and a single pile from the eastern row was seen in Trench 13. The rows were 1.5-0.2 m apart, and the piles of the western row identified in Trench 16 were spaced at intervals of 2.5-3.5 m. The individual piles survived to a height of 0.12 m above the road surface. Timber offcuts located in Trench 1 and 16 demonstrated a variety of toolmarks associated with the preparation of the wood.
- 1.2.10 Part of a possible subsidiary road was recorded in Trench 3 in the form of a cobbled surface (33) that appeared to be aligned at right angles to Road 1. The surface was well-constructed of pitched limestone cobbles and measured 2.70 m wide, and two Roman coins were found between the cobbles.
- 1.2.11 Evidence was recorded in Trench 7 for stone buildings fronting onto the western side of Road 1. Part of a building was exposed in the central part of the trench, where walls 56 and 59 defined the sides of a building with an internal width of c 4.5 m. Both walls were in poor state of preservation but may have had faced surfaces with small rubble infill, and measured c 1.4 m in width. Within the building was a floor surface of dirty gravel from which 1 kg of pottery was recovered. Wall 50, which was situated near the north-eastern end of the trench, may have formed one side of a second building, within which was exposed an occupation layer overlain by a gravel surface. A spread of limestone rubble (69-72) situated on the eastern side of Road 1, in Trench 9, may have represented the remains of a third building. The structure was less clearly defined than those in Trench 7 and was associated with patches of burning that had turned the clay alluvium deep red or orange. Traces of a dirty gravel floor surface were seen among the rubble and as a thin line of gravel in section, and a posthole was also recorded. It was uncertain, however, whether these deposits represented the remains of a building or of an industrial installation such as an oven. A spread of limestone rubble was also identified at the south-eastern edge of Trench 11, but it was uncertain whether this

represented the remains of a building or formed part of the surface of Road 1, the projected line of which passes close to this trench.

- 1.2.12 A feature that may have been a stone-lined well (101) was observed in Trench 13. It comprised a roughly square arrangement of limestone rubble, with a central shaft filled with grey clay. The feature could not be fully excavated due to flooding with groundwater, but finds recovered from it included pottery, glass, coins and a bracelet.
- 1.2.13 Boundary ditches were identified in a number of trenches that may have defined enclosures on either side of Road 1. Ditches recorded in Trenches 4, 7, 12 and 14, in particular, were oriented approximately at right angles to the road. A bank associated with a ditch in Trench 2 was preserved beneath later alluvial deposits.
- 1.2.14 A layer (3) interpreted as an occupation horizon, comprising a deposit of dark grey clay containing gravel, limestone rubble, pottery and animal bone (and also containing 8 brooches, 3 in Trench 13), and measuring up to 0.3 m thick, was recorded throughout the area. It appeared to peter out to the east in Trench 10, although it was also recorded in Trench 2 of Area 3 (below). An alignment of seven test pits was excavated at 10 m intervals from the north-western end of Trench 5, extending into the adjacent field, in order to identify the western limit of the occupation, and the occupation horizon was identified in all but the westernmost test pit (G on Fig. 5).
- 1.2.15 Three palaeochannels were identified. One of these extended through the northern parts of Trenches 1, 3 and 15 and is likely to be a former channel of Standlake Brook. A worked split timber plank with four holes and an axe-trimmed end was recovered from the fill (3/1) of this channel in Trench 1. The other palaeochannels were located in Trenches 4 and 13, but were not investigated in detail.

Area 3 (Fig. 2)

- 1.2.16 Area 3 was situated at the south-eastern edge of the investigations, adjacent to the eastern side of Area 2. It encompassed an area of 8.4 ha and was bounded on its northern side by Standlake Brook. A total of 13 evaluation trenches were excavated in this area.
- 1.2.17 The Roman occupation horizon (3) identified in Area 2 extended into the western part of this area, where it was identified in Trench 2. Three hand-dug test pits were excavated through this layer, and two sherds of pottery of Roman date were recovered. The layer petered out within the trench, but a layer that was stratigraphically equivalent to it and was interpreted as a buried soil layer, but contained no artefactual material, was recorded in Trenches 1, 3 and 5. No other archaeological remains were identified in Area 3. Palaeochannels were identified in Trenches 1, 4, 7, 8 and 10 and tree-throw holes were seen in all trenches apart from Trenches 1, 2, 3 and 12. Alluvium extended throughout the area. The topsoil consisted of a mid brown clay with gravel inclusions and contained a sparse scattering of post-medieval pottery sherds.

Area 4 (Fig. 6)

- 1.2.18 Area 4 was a roughly triangular area bounded on the north by the eastern branch of the River Windrush, on the south by Standlake Brook, and on the east by a

footpath between Gill Mill bridge and a footbridge over Standlake Brook. In total it encompassed an area of c 8.7 ha. An evaluation of this area in 1989, comprising the excavation of 23 trenches, identified a concentration of Roman settlement features in the eastern part of the area. These remains were subsequently recorded by means of a watching brief undertaken during stripping of this part of the area, which investigated a total area of a little under 3.3 ha as well as the line of a drainage ditch at the extreme eastern edge of the area.

- 1.2.19 The features recorded during the watching brief appear to be the rear parts of a series of plots or enclosures laid out along the western side of Road 1 recorded in Area 2, although the road itself was not seen in Area 4 as it lies beyond the eastern boundary of the area. The westerly extent of these plots was defined by a sequence of boundary ditches (3052, 3532). In the northern part of the watching brief area the alignment of these ditches veered away from being parallel to the road to a more nearly north-south orientation. In this area the earliest version of the boundary ditch (3052) was the most westerly, and was c 4.0 m wide. Later ditches to the east perpetuated this alignment through at least two further phases and were related to more ditches aligned at right-angles, the latter presumably separating different properties. Further south the situation was even more complex, with perhaps as many as four phases of ditch running parallel to the line of Road 1, though it is possible that some of these ditches were in use simultaneously. Unfortunately the proximity of the eastern edge of the area examined made it impossible to identify with certainty the number of plots defined by ditches at right-angles to the main alignment, but there may have been at least four such plots, varying in width from c 25-35 m. The plots appeared to stop c 35 m from the southern end of the area, which was occupied instead by a large rectilinear enclosure. Most of the pottery recovered from these features was of late Roman date, but it is possible that this merely dates the latest phase of boundaries that were in fact more long-lived.
- 1.2.20 Three large pits (3005, 3049, 3066) were probably contemporary with the later ditches and they contained waterlogged organic material including wooden and leather objects. Pit 3005 produced a particularly interesting artefactual assemblage, including c 40 limestone and ceramic tesserae of varying sizes, as well as a wooden mallet and a blue glass bead. Another large pit (3512) had been dug through late boundary ditch 3532 and is similarly likely to date from the latest phase of Roman activity on the site.
- 1.2.21 Behind the roadside plots, to the west, further ditches were recorded that may have defined small fields or paddocks. These contained a number of features of uncertain function, some of which may have been tree holes, and one that is tentatively interpreted as a pond.
- 1.2.22 Eight cremation burials and three inhumations were uncovered. A group of two inhumation graves (3130, 3131) and a cremation burial (3102) was situated on the western side of the ditch that defined the rear of the roadside plots near the northern end of the area, and another cremation burial (3003) lay a short distance to the south on the eastern side of the ditch. A second group, consisting of three cremation burials (3523, 3524, 3525) and an inhumation (3526), lay within the large enclosure at the southern end of the area, although it is not certain that the burials and the enclosure were strictly contemporary. Two further cremation burials (3520, 3521) were situated within the rear of one of the plots fronting onto Road 1, and in one of these (3520) the ashes had been buried in a grey ware jar of probable 2nd century date.

- 1.2.23 The most notable object from Area 4 was part of a limestone altar, two joining pieces of which were found at the northern end of the site. These fragments were not stratified.
- 1.2.24 To the west of the area of the watching brief, in the central part of the area, the evaluation trenches exposed a number of ditches that lay on similar SW-NE orientations (Fig. 2). These features produced very few finds and may represent the boundaries of fields associated with the settlement. The western 150 m of the area was devoid of archaeological remains.
- 1.2.25 Four rows of post settings, some containing waterlogged timber, were found in the northern part of the area. The similarity of alignment of one of these rows to ditches in the same area was probably coincidental, however, and it seems likely that these rows represented post-medieval fence lines, despite the fact that some of the settings appeared to be sealed by alluvium.
- 1.2.26 A large proportion of the feature fills recorded in the evaluation of this area exhibited evidence for waterlogging, and consequently a comparative survey of the water table and waterlogged preservation was undertaken. The levels of standing water and of the peaty clay indicative of waterlogging of feature fills in Trenches 1-19 were compared to the water level of the Windrush. The level of waterlogging was on average 0.23 m higher than the level of standing water. The water table dropped gradually towards the south. The difference between the level at which waterlogged preservation was recorded and that of the water table was found to increase slightly towards the southern end of the area. It was unclear whether this increase was being caused by dewatering for gravel extraction in the field south-west of Standlake Brook, or was the normal condition.

Cropmarks east of Area 4 (Fig. 4)

- 1.2.27 A possible cropmark observed in 2011 on Google Maps may represent a northward continuation of the line of Road 1 that was identified in Area 2. The cropmark is situated in the field to the south-west of Gill Mill House, with Area 2 to the south and Area 4 to the west. It appeared to have been formed by growth of contrasting vegetation types in an area of rough pasture that was not subject to archaeological investigation. The cropmark comprises two parallel alignments that appear to correspond with the projected alignment of the roadside ditches that were identified in Area 2 Trenches 1, 5, 9 and 13. However, some caution should be exercised in accepting this interpretation, as it is not possible to be certain whether the cropmark was archaeological in origin. Some particular concern may be raised by the fact that the marks are aligned parallel to the adjacent modern field boundary, and did not appear in the adjacent Field 2, which shows as an area of similar rough pasture on the aerial image.

Areas 6-8 (Figs 2 and 7)

- 1.2.28 Areas 6-8 lay within the central part of the Phase 1 area. Archaeological evaluation was undertaken in two discrete areas. The south-western area lay on the east bank of the eastern channel of the River Windrush and encompassed a total of c 3.1 ha. It was investigated in 1993, when a total of ten trenches were excavated. The north-eastern area was somewhat larger. It encompassed a total area of 10.6 ha and extended from Area 9 to Area 10, and was delimited on its northern side by Hardwick Brook. This area was evaluated in 1995, when a total of 28 trenches were excavated.

The south-western area

- 1.2.29 The only archaeological feature identified in the south-western area was a ditch that was exposed at the north-western end of Trench 3. The ditch, which was aligned north-south, had a rather asymmetrical profile. Its fill was a deposit of stiff grey clay from which no datable artefacts were recovered.
- 1.2.30 Former channels were recorded in Trenches 5, 8 and 9. The palaeochannel at the south-eastern end of Trench 5 had two phases, the later of which had been partially backfilled with gravel recently. A squared wooden stake was found next to this channel. Part of a gravel island was exposed in the central part of Trench 8 with palaeochannels on its north and south sides. The gravel island and the palaeochannel in the southern part of the trench were overlain by a layer of red soil that may have been a remnant of a former soil horizon. Like the palaeochannel in Trench 5, the palaeochannel to the north of the gravel island had been partially backfilled with gravel, and it is likely that these are the same feature. The palaeochannel recorded in Trench 9 lay on a north-south alignment and was relatively insubstantial.
- 1.2.31 A consistent sequence of alluvial deposits was recorded in all ten trenches. Shallow deposits of either grey or buff alluvium with a depth of 0.44-0.66 m were recorded in Trenches 1-4. Trenches 6, 7, 9 and 10 all sloped gently towards the adjacent River Windrush and the alluvium was correspondingly deeper, up to a maximum depth of 0.89 m. Tree-throw holes were observed in all ten trenches.

The north-eastern area

- 1.2.32 An alluvial deposit occurred over most of the north-eastern area, although not always as a continuous layer, and was cut by archaeological features. The features were concentrated in Trenches 13-15, 22 and 24-28, at the eastern end of the area, and formed a continuation of the Roman settlement area in the adjacent Area 9 to the east. This distribution is consistent with the existing cropmark evidence. The majority of the features comprised ditches oriented either NNE-SSW, parallel to the orientation of Road 1 and associated enclosures in Area 9, or at right angles to this. In contrast to the remains recorded in Area 9, which were predominantly late Roman, the features in this area were almost all of 2nd century date.
- 1.2.33 Trenches 15, 25 and 26 were extended to form larger excavation areas, occasioned by the presence of human remains in Trenches 15 and 26. In Trench 15 the enlarged area contained a sub-rectangular enclosure that contained five inhumation burials and a pit. The enclosure appeared to be set within the junction of two linear boundary ditches that met within the stripped area and extended beyond it to north and east. A rather curvilinear ditch defined the north and east sides of the enclosure, with a rounded north-eastern corner from which a third linear boundary ditch extended toward the east. The enclosure measured c 14 x 14 m and had no clearly defined entrance. The pottery recovered from the ditch was entirely of 2nd century date. Two intercutting burials (15/5, 15/23) and a third, badly plough-disturbed, burial (15/27) were situated near the northern edge of the enclosure and two further burials (15/31, 15/38) lay near the south-western corner. None of the burials was accompanied by grave goods, but all five contained sherds of 2nd century pottery within their backfill. However, grave 15/31 cut a pit (15/35) that contained pottery of late 3rd century date, raising the possibility that

the burials date from the latter part of the Roman period and had been inserted into an enclosure that has originally been created at least a century earlier. A single urned cremation (15/42), dating from the late 1st-2nd century, was situated outside the enclosure near the western edge of the excavated area.

- 1.2.34 The area excavated around the extended Trench 25 exposed four ditches that formed either a rather complicated junction of field or enclosure boundaries or an unusual, sub-rectangular enclosure with multiple entrances located at each corner. The ceramic evidence from these features again indicates a date in the 2nd century, and included a particularly large group from enclosure ditch fill 25/36 weighing more than 3 kg that indicated a date of AD 80-130.
- 1.2.35 Trench 26 revealed three linear boundary ditches (26/7, 26/17, 26/20), which lay on parallel NNE-SSW alignments, as well as four inhumation burials and four cremation burials. The burials appear to have been deliberately placed beside the boundaries, as two inhumation burials (26/25, 26/28) and the cremation burial (26/31) lay close to ditch 26/7 and the other two graves (26/24, 26/40) and two of the cremation burials (26/56, 26/57) were situated in close proximity to ditch 26/17. Cremation burial 26/64 was situated 5 m east of the latter ditch. The only datable material recovered from the ditches comprised three sherds of late 1st-2nd century pottery from the surface of ditch 26/17, but the burials may be rather later in date, as late Roman pottery was recovered from the backfill of grave 26/25.
- 1.2.36 The western limit of the features associated with the Roman settlement may have been delimited by a trackway defined by a pair of parallel ditches that extended through Trenches 7, 16 and 17 on a roughly north-south alignment. The trackway was 3.6 m wide between the ditches and was dated to the late Roman period by two sherds of pottery recovered from the fill of the eastern ditch in Trench 16.
- 1.2.37 The trenches in the western part of the area were mainly positioned to sample palaeochannels and associated gravel islands that had been identified as cropmarks. The channels as they were revealed in the trenches were undated and mainly shallow and braided, being typically only 0.60 m in depth. The only deep channel was one seen in Trench 8 which was 1.30 m in depth. There were no peaty deposits, of a type previously recorded to the south in Area 4. The bottom of the channels consisted of exposed gravel which had been washed and scoured by water. The earliest channel deposit was a gravelly clay loam which must have once been a waterlogged soil and contained occasional animal bone. This was then overlaid by a thin (0.10 m) layer of alluvial clay, in turn overlaid by an alluvial clay deposit with a high calcareous gravel content. In the case of Trenches 5 and 18 this deposit seemed to be composed of sand and gravel, suggesting a high-energy phase of deposition. The final clay alluviation within the channels appeared to cover a large area of the site, and although there was no direct relationship between the palaeochannels and the Roman features, it seems probable that the channels were filled in by the Roman period.

Area 9 (Fig. 8)

- 1.2.38 Area 9 was situated in the central part of the investigations, and contained one of the densest concentrations of archaeological remains. It encompassed an area of c 5.7 ha located immediately north of Gill Mill House, bounded to the north and south by Hardwick Brook and the eastern channel of the River Windrush, to the west by Area 6-8, and to the east by the access lane to Gill Mill House. An evaluation undertaken in 1997, comprising a total of 22 evaluation trenches,

indicated that Roman remains were present throughout the area, as a result of which a watching brief was undertaken during topsoil stripping in 1998 and 1999.

- 1.2.39 The watching brief recorded parts of two substantial blocks of ditched enclosures, occupying the northern and south-western parts of the area respectively, and part of a possible third block in the south-eastern corner, with a large open area in the central area. The northern block of enclosures, the limits of which were defined by ditches 358 and 1248, extended for at least 190 m NW-SE x 125 m NE-SW, although both its northern and eastern limits lay beyond the excavation area. It had been sub-divided into western and eastern components. The two halves had been treated rather differently, the eastern part having been further sub-divided by subsidiary east-west boundaries (eg 1142) whereas division within the western half was characterised by the creation of smaller rectilinear plots, most of which lay on its southern frontage. The block of enclosures in the south-western part of Area 9 was defined by ditches 350 and 650 and had been subdivided by a series of east-west ditches (352, 494) into at least three rectilinear enclosures of roughly equal dimensions. The ditch that defined the eastern boundary of this block (650) appeared to be a continuation of ditch 3052, which was identified in Area 4 as defining the rear of the plots that fronted onto the main NNE-SSW road (Road 1, above), in which case the enclosures in this block may be analogous with the small fields or paddocks that lay behind those plots. Only the north-western corner and parts of the northern and western sides of the block in the south-eastern corner (1900) lay within the area that was exposed during the watching brief, and consequently little can be said regarding its morphology or function. The ditches defining all three blocks exhibited evidence for multiple phases of recuts, and although the dating evidence for these features came entirely from surface finds it appeared to indicate that they were initially established during the 2nd century and that redefinition continued into the 3rd-4th century.
- 1.2.40 The open space between these blocks of enclosures was trapezoidal in shape and may have measured as much as 125 m east-west, although this width may have been reduced in at least one phase of its existence by a pair of curving ditches (884, 1452) that projected from the north-eastern corner of the block of enclosures on its western side and the north-western corner of the block on its eastern side. Two otherwise undated ditches that were recorded at the southern edge of the watching brief area (1131, 1234) may have enclosed its southern side, and if this identification is correct the open space will have measured c 135 m from north to south. Possible entrances into this area were situated at the north-western and south-eastern corners, and the northern part of the eastern side also appeared to have been open. Part of a patchy stone surface (1307) consisting of pebbly gravel and limestone pieces was identified in the southern part of the open space. The surface measured at least 7.5 x 5.0 m, although its northern and southern extents could not be fully defined as they lay beneath spreads of stony soil that extended for c 20 m to the north and c 8 m to the south. Scattered Roman pottery and tile was found above the surface, as well as two late Roman coins.
- 1.2.41 During the later part of the Roman period, a large number of pits were dug within the open space and the southern part of the block of enclosures to the north. The block of enclosures on the western side of the space, in contrast, was almost devoid of such features. Pits typically measured 2-4 m in diameter, although there were some areas of intensive intercutting pit digging activity, within which individual features could not be readily distinguished in plan, and such areas could be quite extensive. Smaller pits of 1.0 m or less in diameter were relatively scarce

and the size of the majority suggests that they might have been the result of sporadic quarrying activity. Several pits contained partly preserved waterlogged timbers. The most significant of these discoveries was of part of a cart wheel, consisting of most of one felloe and two spokes, all of oak, recovered from pit 1312. Overall, however, the watching brief character of the work meant that many pits were only recorded in plan, so the nature of associated finds and environmental assemblages is largely unknown.

- 1.2.42 The distribution of pits included eight stone-lined wells. These were predominantly located within the northern half of the open space, although one outlier (2034) was situated at its eastern edge and two lay close together within the block of enclosures to the north. Two wells (1050, 1300) were excavated and were found to be 1.43 m deep and 0.85 m deep respectively. Unlike most of these features, which had been dug, apparently preferentially, into areas of "ragrock" that occurred in bands across the site, well 1300 had been dug into gravel, and the stone lining extended for its full depth. In well 1050, however, the stone lining was only present in the upper part and the lower part was entirely rock-cut.
- 1.2.43 A total of seven inhumation burials (377, 380, 702, 758, 986, 992, 1305) were situated within the watching brief area, all but one of which had been buried beside boundary ditches. The exception to this was burial 1305, which lay at least 10 m from the nearest ditch. The individual in this burial was also unusual in having been buried in a crouched position rather than extended, and appeared to have been inserted into the top of an existing pit rather than being buried in a formal grave pit. Fragments of leather shoes survived on this individual's feet, and similar fragments elsewhere in the grave may have derived from other items of clothing. Burial 702, one of two burials that lay on either side of a boundary ditch in the south-western part of the area, was also unusual in that the individual lay partly turned on his/her right side.

Area 10 (Figs 2 and 9, Plate 1)

- 1.2.44 Area 10 comprised a field located in the northern part of the investigation area, on the east bank of Hardwick Brook. It was approximately square in plan and encompassed an area of c 5.4 ha. The area was evaluated in 1989, when a total of 23 trenches were excavated. This investigation revealed evidence for an area of potential Neolithic activity on a gravel island at the northern corner of the field, in Trenches 2 and 3, and a middle Iron Age enclosure near the south-eastern edge of the area, in Trenches 13, 20, 21 and 22. Both these areas were investigated more fully by open area excavation in 1990.
- 1.2.45 Trenches 6 and 7 were laid out in a cruciform shape in order to examine a circular cropmark feature that had been interpreted as a possible barrow ditch, but no indication of a feature of this type was identified. These trenches did, however, expose part of a cobbled trackway that extended across the eastern part of the area on a NNE-SSW orientation. The trackway was also identified in Trenches 8 and 18, although in these trenches it survived only as a concentration of limestone rubble in the ploughsoil. No dating evidence was associated with the trackway.
- 1.2.46 A block of ridge and furrow was recorded in the northern part of the area, in Trenches 1, 2, 4, 5 and 9, with furrows oriented NE-SW and spaced at intervals of 10-12 m.

- 1.2.47 A layer of clay loam alluvium extended throughout all 23 trenches and was interpreted as resulting from inundation during the medieval/post medieval periods, although no finds were associated with it. Its colour varied from trench to trench from a mid brown buff to blue grey. In the majority of the trenches it rested on the natural flood plan gravel and was 0.03-0.23 m thick.
- 1.2.48 Topsoil in this Area was 0.16-0.2 m thick and consisted of a dark brown silty clay loam with up to 10% limestone gravel and occasional quartzite pebbles. Finds from it were limited to a few pieces of worked flint, including a twin opposed platform blade core possibly of Mesolithic date.

Open area excavation in the northern part of Area 10

- 1.2.49 The detailed investigation of the area of Neolithic activity found the remains to be rather more sparse than had been assumed from the results of the initial evaluation. A number of possible pits and postholes were identified, but few contained any artefactual material. The most substantial feature was a pit that was investigated during the evaluation, in Trench 3. The pit had a diameter of 1.6 m and a surviving depth of 0.85 m. The profile changed from a sloping top to vertical lower sides and a rounded base. The pit contained a piece of worked flint and a fragment of ?shale, together with charcoal and burnt limestone pieces. A single sherd of late Neolithic pottery was recovered from the fill of tree-throw hole 27, which was also investigated in evaluation Trench 3. Pit 1001, which was situated c 50 m from these features, near the western edge of the stripped area, also yielded a small artefactual assemblage. The pit measured 1.4 m in diameter and 0.3 m deep and contained a flint blade, several flakes and some fragments of animal bone. None of the other features investigated in this area produced any finds, although pit 1019 exhibited possible evidence for human activity in the form of charcoal flecks in its upper fill. Evidence for past waterlogging was observed in the fills of pit 1013, although the fills had since dehydrated. A ditch (1003=1004) extended across the area on a NW-SE orientation. The ditch was discontinuous, but it was uncertain whether this indicated that it had originally been dug as a segmented feature or whether its appearance was the result of truncation of parts of the ditch by later ploughing. No dating evidence was recovered from this feature.

Open area excavation in the southern part of Area 10 (Fig. 9)

- 1.2.50 The area excavated around the locations of Trenches 13, 20, 21 and 22 measured c 35 x 45 m, and exposed a small complex of features of middle Iron Age date. This area had been stripped of topsoil and some upper gravel after the initial evaluation trenching, and had then been used as a ballast stock pile site for a short time. This ballast was removed before archaeological work restarted, but these operations had caused considerable damage and disturbance to the clay fills of ditches.
- 1.2.51 The earliest feature identified in this area was a house circle situated in the south-eastern part of the excavated area (Plate 1). This structure survived as a complete ring gully (2003), which measured c 8 m in diameter and up to 0.4 m deep, with a partial gully (2036) situated concentrically within it. This inner gully only survived on the south-western side of the structure and was interpreted as a wall trench, with the outer gully serving as a surrounding drip gully.

- 1.2.52 A group of small postholes, all measuring 0.08-0.11 m in depth and filled with blue-grey or brown-grey clay, was situated within the eastern part of the structure. The relationship of these features to the gullies was uncertain. They lay both inside and outside the inner gully but formed no coherent pattern. An arc of narrow gully (2011) enclosed a small area to the south of the house circle, but it was unclear whether this represented a replacement for the structure or a small enclosure associated with it.
- 1.2.53 The north-western side of the house circle was cut by the ditch of a sub-rectangular enclosure (2004). The ditch survived to a depth of 0.45 m, and defined an enclosure measuring c 22 x 13.5 m and aligned NW-SE, lying entirely on the north-western side of the house. The width of the ditch varied from 1.25 m in the north-east to 0.90 m close to its terminals in the south corner, and it had a U-shaped profile. Parts of the ditch had been badly damaged by machining operations. The ditch had two certain terminals in the south corner, with a south-west facing entrance 1 m wide at this point. A short stretch of shallow ditch (2048) that may represent part of an earlier phase of the enclosure ditch was identified at the north-eastern corner of the enclosure. It was flatter in profile than the enclosure ditch, but had a similar fill. A single pit (2020), containing animal bone, lumps of burnt limestone and charcoal flecks, was the only certain archaeological feature found within the enclosure.
- 1.2.54 The rounded north-west corner of a second, larger enclosure attached to the south-west corner of the first enclosure was located in the southern part of the area investigated. The enclosure ditch (2001) was a smaller and much shallower feature than the ditch of the northern enclosure. The length exposed showed several direction changes and its overall shape cannot be determined, although within the investigated area the ditch only enclosed the northern and western sides of a probable enclosure, and it is possible that the eastern side was left open; there was no indication within the excavated area that the space immediately east of the round house had been enclosed. Ditch 2001 varied both in width (0.6-0.9 m) and in depth. Particular variation in its depth was noticed towards the most northerly point, but was apparently the result of differences in the underlying gravel here. It remains possible, however, that the depth changes indicate the existence of short stretches of other ditch cuts in the vicinity of the entrance to enclosure 2004. To the north-east, the surviving course of ditch 2001 became very slight and was lost c 0.30 m west of the terminal of ditch 2004. The shallow ditch ran so close to the terminal that no entrance can have been left between them and it is likely that the two ditches were contemporary.

Plant Area 16 (Fig. 2)

- 1.2.55 The Plant Area 16 lay at the western edge of the investigations, between Hardwick Brook and the eastern channel of the River Windrush, and encompassed an area of 3.2 ha. The evaluation of this area comprised the excavation of a total of nine trenches. A watching brief was maintained during the stripping of this area, which followed immediately after the evaluation, but no further features were identified. During the opening of the haul road into the southern corner of the area, adjacent to the eastern channel of the River Windrush, an area of limestone rubble was observed. This may have been the remains of a ford similar to that recorded in Area 1, or a continuation of the trackway seen in Area 10.

- 1.2.56 A concentration of features of Neolithic date was identified in Trenches 2, 4 and 5, where the surface of the natural gravel rose up slightly to form a low island or prominence. A flint blade was recovered from the fill of a feature in Trench 2 that was interpreted as the terminal of a ditch with a curved profile and a flat base (23), and a second small ditch (19) extended across the trench on a north-south alignment. A small group of three tertiary flakes was recovered from pit 21, and eight other features were recorded in this trench that may have been either pits or tree-throw holes. Fire-reddened pebbles were observed in the fill of pit 4, but no other artefacts were recovered from these features. Two large flint blades were recovered from the alluvium sealing the features in this trench. A circular pit (29) and a posthole with a charcoal-flecked fill (32) were recorded in Trench 4, as well as two features that were interpreted as tree-throw holes, one of which had a charcoal-rich fill. Two features were recorded in Trench 5. Pit 27 was an irregular feature, possibly a natural hollow, filled with a single deposit of grey clay that contained a small flint flake, and pit 28 was sub-rectangular in plan and had a charcoal-flecked fill from which were recovered four flint flakes.
- 1.2.57 A number of possible features were identified in Trench 1, at the south-eastern end of the area. A possible gully terminal (5) was recorded near the north-eastern end of the trench, and six possible pits and four smaller, posthole-sized features were also investigated. No artefacts were recovered from any of these features, however, and it is possible that they were all natural in origin.
- 1.2.58 No archaeological features were identified in the remaining trenches. A layer of alluvial clay (2) was recorded in all nine trenches. It was typically 0.1-0.15 m thick, but was thinner where it overlay the prominence in Trenches 2, 4 and 5 and only survived in patches in Trench 5. Trench 3 revealed a lower-lying area beside the River Windrush, where the alluvium was rather more substantial, and a tree stump preserved by waterlogging was recorded at a depth of 1.4 m from the modern ground surface. The topsoil was a mid-dark brown soft silty clay with alluvial subsoil ploughed into it. The only artefact recovered from it was a flint blade near Trench 5.

Silt Pond 17 (Fig. 2)

- 1.2.59 Silt Pond 17 was an approximately triangular area of c 4 ha situated at the western edge of the investigations, between Standlake Brook and the eastern channel of the River Windrush. Two evaluation trenches were excavated in the central part of the area, one of which was located to investigate a cropmark feature that had been recorded on aerial photographs as a linear feature that followed a zig-zagging course across both this area and Area 1. A third trench was opened beside the Windrush at the northern edge of the area when part of a stone structure was exposed during the digging of a drainage channel to de-water the silt pond.
- 1.2.60 Trench 1 exposed a former channel, adjacent to which was part of a cobbled trackway or ford. The latter had been carefully constructed, with a foundation layer of large limestone blocks overlain by a metalled surface of smaller cobbles. Neither feature could be securely dated, although a fragment of tile, possibly of Roman form, was pressed into the cobbled surface. No archaeological features were identified in Trench 2.
- 1.2.61 The structure exposed in Trench 3 was interpreted as a spillway with a carefully engineered cobbled leat and run-off chute that may have divided the flow of water

into numerous small ditches, including the channel previously identified as a cropmark. A small quantity of partly green-glazed pottery of post-medieval date was recovered. A few small pieces of structural ironwork and gate hinge bearer are the only other finds.

- 1.2.62 Alluvium was present throughout all three trenches and was overlain by a layer of topsoil that produced only a few sherds of pottery.

Reserve Area (Area 13) (Fig. 2)

- 1.2.63 The Reserve Area is located at the north-western end of the investigations, on the eastern side of Hardwick Brook, and to date encompasses an area of c 8.5 ha. Watching briefs maintained during three phases of topsoil stripping in the south-eastern part of this area between 2000 and 2003 covered an area of 5.4 ha. The greatest density of features in this area, including some dated to the middle Iron Age and early Roan periods, lies at the north-western end, examined in 2010.
- 1.2.64 Topsoil stripping of this area in 2000-2003 exposed ditches that are likely to represent the boundaries of fields associated with the settlement to the south-east, although no dating evidence was recovered. At least two phases of boundaries were identified, although most of the features were attributed to the earlier phase. A significant boundary in the earlier phase was represented by a somewhat curving ditch (101) that extended into the area from the south-east for a distance of c 200 m. Its alignment suggests that this feature is a continuation of the ditch that was recorded in the open area excavation in the northern part of Area 10. As in Area 10, the ditch was incomplete, with some sections having apparently been truncated by more recent ploughing. At its north-western end the ditch turned a right-angle toward the north-east. A series of ditches in the north-western part of the area that lay on similar NW-SE and NE-SW alignments are likely to have formed part of the same complex of boundaries. These boundaries were superseded by boundaries that lay on a WNW-ESE and NNE-SSW orientation. This later layout was represented by two ditches in the central part of the area that lay on parallel NNE-SSW alignments, the eastern of which cut ditch 101, and a number of similarly-aligned ditches to the north and east of these features are likely to have been contemporary with them. A small number of pits were identified in this area, but none produced any dating evidence.

Phase 2 (SLGM)

Working Area (Fig. 10)

- 1.2.65 During 2001 an archaeological watching brief was undertaken during the stripping of overburden from the Working Area, which was situated between Cogges Lane and Hardwick Brook and encompassed an area of c 3.9 ha. Careful machining revealed that two distinct archaeological horizons were present, stratified above and below the alluvium that extended across the site.

Features sealed beneath the alluvium

- 1.2.66 A large irregular pond or water-hole (201), into which a narrow gully fed was identified adjacent to the eastern edge of the area. Ephemeral traces in plan of a possible ditch (202) extending from the south-eastern edge of the site were noted

during stripping, but further investigation of the feature proved inconclusive as to its nature. An undated pit (248) that contained a large deposit of animal bone was also excavated. Irregular features noted across the site were partly investigated and it was concluded on site that they represented tree-throw holes or natural hollows.

Features cutting the alluvium

- 1.2.67 A single east-west aligned ditch (206) extended across the site, cutting the alluvium, and was also observed in Phase 2 Area 1. The ditch measured 1.5 m wide and up to 0.38 m deep.
- 1.2.68 Two further ditches (210 and 229), aligned NE-SW, converged towards the south-west baulk of the site and cut the fills of ditch 206. Ditch 210 was 1.55 m wide and 0.4 m deep and ditch 229 was 2 m wide and 0.62 m deep. No finds were recovered from the fills of these ditches and because of their converging alignments (the distance between the two narrowing from 12 m to 4 m at the south-west baulk) it is unclear whether the two features were contemporary, or whether one represents a redefinition of the other. Nevertheless, a Roman date for both is likely.
- 1.2.69 Four cremation burials (216, 218, 222, 224) were identified in this area. Cremation burial 216 was oval shaped with a rounded base; the northern edge of the feature had been partially removed by plough action. The feature measured 0.34 x 0.2 m and 0.09 m deep. It was filled with a single deposit of loose brown silty loam mixed fragments of burnt human bone, and contained sherds of Roman pottery. Cremation burial 218 to the north was oval shaped with irregular sides and base and had a depth of 0.06 m. The feature measured 0.24 x 0.18 m wide and was filled by a brown clay deposit that contained fragments of burnt bone. South-east of ditch 210 lay a third cremation burial (222). The pit was oval with a narrow extension at one side, and measured 1.0 x 0.62 m and 0.14 m deep. The fill was a grey clay that became darker toward the bottom. Frequent charcoal flecks were noted in the fill, with quantities of burnt human bone increasing in density towards the base of the feature. Two small crumbs of Roman pottery were recovered from the fill. Cremation burial 224 was situated in a rather isolated location toward the north-eastern edge of the area. It had irregular sides and base and measured 0.87 x 0.6 m and 0.25 m deep. The fill of the feature comprised a grey-black clay with frequent charcoal inclusions, burnt limestone pieces and towards the base of the deposit several pieces of burnt human bone.

Area 1 (Fig. 11)

- 1.2.70 Only three archaeological features, all of them ditches, were recorded in this area, sealed beneath the modern topsoil and a layer of alluvium. The earliest of the three was ditch 263, which extended across the southern part of the area on an east-west orientation. Its alignment indicated that it was the same feature as ditch 206, which was recorded in the Phase 2 Working Area, and also corresponds with a boundary identified in Area 2 to the east. Three tiny scraps of animal bone, seven sherds (76 g) of 3rd century pottery and a few fragments of burnt stone were recovered from the upper fill. Ditch 263 was cut by a pair of parallel ditches that are likely to define a trackway that extended on a NE-SW orientation. The ditches were spaced 10 m apart and traces of a possible metalled surface were

observed in section at the south-western edge of the area. The trackway was also identified in Area 2.

Area 2 (Fig. 11)

1.2.71 This was a large area that was situated on the north side of Cogges Lane, immediately east of Area 1. It encompassed a total area of c 10.7 ha and was investigated in three stages during 2002 and 2003. Three phases of archaeological features were identified, comprising a possible middle Iron Age roundhouse, two early Roman enclosures with associated features, and field boundary ditches that are likely to form part of an agricultural landscape around the settlement identified to the south-west. There was also a fairly uniform spread of irregular features that were either of geological origin or represented other natural features such as tree-throw holes.

Middle Iron Age

1.2.72 The remains of a possible roundhouse was identified near the south-western corner of the area, represented by two curving lengths of gully (10, 12) that may have defined the western and eastern sides of a ring gully, through which a later ditch had been cut. No artefacts were recovered from this possible structure, but its proximity to similar features of middle Iron Age date recorded in the adjacent part of Area 3 suggests that it is likely to be an outlying structure of that settlement.

Early Roman period (1st-early 2nd century AD)

1.2.73 Two ditched enclosures and a number of associated pits and ditches were identified that appeared to represent part of an agricultural establishment dating from the 1st-early 2nd century. These features were all situated in the south-western part of the area, a short distance north of the possible middle Iron Age roundhouse.

1.2.74 The larger enclosure was roughly oval in shape and had evidence for three phases of use, each circuit being larger than its predecessor. The earliest phase appeared to be represented by ditch 58, which ran roughly east to west before turning sharply to the south and terminating. It is quite possible that a continuation of this ditch, defining southern and eastern sides of the putative enclosure, lay on the same alignment as the later enclosure ditch 28 and has not survived. A second, more clearly-defined phase of enclosure was represented by gully 30, which enclosed an oval area measuring c 25 x 18 m. The ditch was poorly preserved on the southern side, but may originally have been continuous here, and there is clearer evidence for a break defining an entrance some 3 m wide in the western side. The position of the northern terminal of this entrance was replicated by a corresponding terminal of the ditch that enclosed the third and final phase of the enclosure (28). This enclosed a slightly larger area, with maximum internal dimensions of c 35 x 23 m. There was a well defined terminal just north of the south-west 'corner' of the enclosure. This suggests an opening some 15 m wide on the west side, but it seems more likely that part of the western side of the second phase ditch (28) was retained, perhaps giving two entrances in the west side, each measuring c 2-3 m across. There were no significant internal features

associated with the enclosure. A small group of irregular pits lay just to the north. Two of these were cut by ditch 28 and may therefore have been contemporary with the first and/or second phase of the enclosure. All were interpreted as probable 'quarry pits', presumably for gravel, on the basis that their irregular form did not suggest any other specific function. All but one produced small quantities of early Roman pottery and a few fragments of animal bone from their fills. A short gully (64) ran north-westwards from the enclosure ditch (28) before turning back very sharply eastwards to approach the group of pits and terminating.

- 1.2.75 To the west of this enclosure lay a small square enclosure (147). It was defined by a continuous ditch with no apparent entrances, and measured c 7.5 x 7.5 m. The gravel in the enclosed area was noted as being a little darker than elsewhere, but there were no internal features of any kind.
- 1.2.76 Two ditches (18, 20) that extended into the excavation area from the south-east and terminated a short distance from the larger enclosure may represent the remains of a ditched trackway c 2.5 m wide. No finds were recovered from either ditch, but they were cut by a ditch (16) that has been attributed to the 2nd century and so are likely to date from the early part of the Roman period, and to have been contemporary with the enclosures.

Middle Roman (2nd century)

- 1.2.77 A significant boundary appeared to be represented by a sinuous ditch (16) that extended on a general north-south alignment for the entire length of the area, adjacent to its eastern margin: a total distance of c 340 m. It was up to 3.4 m wide but not more than c 0.5 m deep. Localised evidence suggests that this boundary may have been of several phases, as short lengths of parallel or slightly converging ditches were noted in at least three places, all on the west side of the main ditch. In the one instance where a relationship could be seen clearly ditch 16 was the later feature. There was a break in the feature just north of the area of enclosure 28, where a stone causeway c 2.5 m wide appeared to reinforce a gap between two terminals, although the terminals themselves were not examined in detail. What little pottery was recovered from the ditch indicated that it dated to the 2nd century.
- 1.2.78 The area to the west of boundary ditch 16 was divided by a ditch (1037) that branched off ditch 16 and extended westward. Its alignment indicated that it defined the same boundary as ditch 206 in the Phase 2 Working Area and ditch 263 in Phase 2 Area 1. No features were identified to the north of this boundary, but the area to the south was sub-divided by further ditches. Ditch 1061 branched off the southern side of ditch 1037 and extended to the SSW for at least 125 m, eventually continuing beyond the southern edge of the area. Some 120 m east of ditch 1061, L-shaped ditch 1038 defined two boundaries that lay parallel to those formed by ditches 1037 and 1061. At its eastern end it turned back toward the south, perhaps respecting the boundary defined by ditch 16. Further ditches defined the boundaries of rectilinear fields or enclosures within the area enclosed by ditch 1038.
- 1.2.79 The ditched trackway that had been identified in Area 1 continued across the north-western part of Area 2 on the same NE-SW orientation. Curiously it was not located at the northern margin of the area, which was stripped in 2002 for a drainage channel, but this absence is likely to be a localised aberration. No finds were recovered from the ditches, nor was any trace of surface metallurgy observed.

Area 3 (Figs 12 and 13)

1.2.80 Area 3 was a large, roughly triangular area bounded on its north side by Cogges Lane, to the south and south-west by the re-routed channel of the Hardwick Brook, and to the east by Area 5 (Fig. 2). The infilled former channel of the Hardwick Brook was revealed during excavation, following a somewhat sinuous course through the area and effectively dividing the area into western and eastern halves. The western half of the area was excavated in 2005 and investigations in the eastern half were carried out in several phases in 2006. The latter entailed excavation of the north-eastern corner of the area, and, following removal of a soil bund, of an adjacent area. The southern margin of the area was also investigated. Across the remainder of the eastern half of Area 3 a watching brief was maintained only during topsoil stripping, and no archaeological features were identified. Part of a middle Iron Age settlement was identified in the north-eastern part of the area, and a number of boundary ditches of Roman date were encountered in the same general vicinity. Late Roman activity was restricted to the western part of the area and comprised a ditched trackway, an enclosure and associated boundary ditches.

Middle Iron Age (Fig. 12)

1.2.81 A group of three ring gullies (5032, 5062, 5107) identified near the north-eastern corner of the area are interpreted as forming part of a middle Iron Age settlement. Ring gullies 5032 and 5062 both lay partly beyond the edge of the excavation, and although ring gully 5107 was situated entirely within the excavation area it had been partly removed by more recent ploughing, and only the north-eastern quadrant and part of the south-eastern edge survived. The most complete of these features was ring gully 5032, which measured c 10 m in diameter and yielded a small amount of middle Iron Age pottery. Three possible postholes were identified within its interior. No finds were recovered from the limited excavation of the other two ring gullies. Two postholes (5068, 5070) that were identified to the west of ring gully 5062 may be contemporary with these structures, as a sherd of middle Iron Age pottery was recovered from the upper fill of posthole 5068. Redeposited pottery of this date was also recovered from the fill of Roman ditch 5029, which cut the north-western part of ring gully 5032.

Middle Roman (2nd century) (Figs 12 and 13)

1.2.82 At the extreme north-eastern corner of the area was a junction of two substantial curvilinear ditches, one of which (5029) cut gully 5032. Further west and south-west were additional ditches and gullies. The relationships between these were not always clear, and it is likely that they represented several phases of activity, albeit mostly if not entirely within the middle Roman period (apart from occasional examples perhaps of post-medieval date). The most distinctive elements were north-west to south-east aligned ditches probably forming part of a system of small fields.

1.2.83 A small group of ditches were recorded at the western end of the area excavated at the southern tip of Area 3 that were of middle Roman date and are likely to represent the northern extent of the complex of enclosures situated immediately to the south in Area 4. Ditch 5175 appeared to be the south-eastern corner of an

enclosure that otherwise lay beyond the edge of the excavation area. There was some evidence from the silting profile of its fills for redeposited mixed natural tipping in from the west, possibly suggesting the presence of a bank adjacent to that side of the ditch. A second ditch (5177) extended parallel to the southern side of ditch 5175 and terminated level with its corner. Ditch 5177 produced a very large ceramic assemblage, amounting to more than 14 kg of pottery of late 1st-2nd century date.

Late Roman (3rd-4th century) (Fig. 13)

- 1.2.84 The area west of the infilled former channel of the Hardwick Brook revealed evidence for activity dating from the later part of the Roman period. The most significant boundaries in this area were provided by a trackway that extended along the northern edge of the excavation area and a boundary ditch (4110) that branched off the trackway extended to the south, eventually continuing beyond the southern edge of the excavation. The trackway followed a somewhat sinuous east-west alignment and may have originated as a boundary defined by a single ditch, as the ditch defining the southern side had been cut on three separate occasions on slightly differing alignments. The initial two phases of this ditch (4094, 4114) were undated, but the latest produced pottery of late Roman date, and it was this feature to which the ditch defining the northern side of the trackway, which appeared to have only a single phase, lay parallel. Ditch 4110 was contemporary with the earlier phases of the southern trackway ditch, but the presence of late Roman pottery in its upper fill indicates that it remained open and presumably still served as a boundary at this time. The area west of this ditch was quite intensively used, with an enclosure and boundary ditches, whereas the area to the east was devoid of archaeological features apart from the ditch of an undated enclosure (4096/4112, below).
- 1.2.85 Enclosure 4130 was situated within the junction of the trackway and ditch 4110 and appears to have formed an integral part of the design of the third and final phase of the trackway/boundary, as the ditch defining the southern side of the trackway turned to enclose the western side of the enclosure. The enclosure itself had a rather unusual form. It was approximately square and measured c 30 x 30 m and had an unusual entrance at the north-western corner, where the ditch defining western side was off-set from the corner and extended around the outside of the ditch that defined the northern side. The alignment of this outer ditch was continued by a short segment of ditch and a group of five pits that created an entrance passage c 2.5 m wide along the northern side of the enclosure. Each pit was approximately square and measured 0.8-1.2 m across. All were steep sided and flat bottomed, and none was more than 0.15 m deep. The enclosure had more simple entrances at the north-eastern corner and in the southern side, although the latter entrance was embellished by an outwork that projected southward for c 15 m from its eastern side. The ditch that defined the southern side of the enclosure continued beyond the south-eastern corner and extended for a further 18 m, terminating just short of ditch 4110, and the area between the enclosure and ditch 4110 was subdivided by two further ditches that lay on parallel alignments. Few features were identified within the enclosure. Three pits were recorded, all of which were 0.8-1.0 m deep and may have been waterholes. A segment of gully measuring c 13 m long was also recorded, but no finds were recovered from its fill and it is not certain that it was contemporary with the enclosure.

- 1.2.86 A stone-lined well (4161) was situated immediately outside the enclosure's southern entrance, within the area enclosed by the outwork, and may have been associated with its use. The well was 0.75 m deep and the shaft appeared to have been backfilled with a single deposit of dark grey soil. Pits 4172 and 4177, which were located nearby, were of a similar depth, suggesting that they too penetrated the water table and may have been dug as waterholes.
- 1.2.87 The area to the west of the enclosure was enclosed by a substantial boundary ditch (4034) that extended east-west across the site for a distance of c 75 m. At its eastern end the ditch terminated c 6.25 m from the outwork associated with the southern entrance to the enclosure, and it is likely that the function of the boundary was related to the use of the enclosure. Some undated ditches extended across the area enclosed by boundary ditch 4034 and may represent subdivisions within it. This area also contained a small number of pits, of which pits 4026 and 4030 were particularly substantial, with depths of 0.9 m and 1.0 m respectively, suggesting that they may have been waterholes.
- 1.2.88 This complex of features appears to have continued further to the west, but here only a narrow corridor was excavated, along the line of a conveyor belt. Ditches and a small number of pits were recorded in this area, but their interpretation was hampered by the limited extent of the area exposed. Nevertheless, the identification of an L-shaped ditch (4010) may suggest the presence of a second enclosure similar to enclosure 4130.
- 1.2.89 A ditch (5174) extended into the area excavated at the southern tip of Area 3 and is likely to be a continuation of boundary ditch 9955, which formed part of the complex of enclosures situated immediately to the south in Area 4. The ditch was substantial, ranging from 2.25-3.5 m wide and survived to a depth of up to 0.8 m. It had been recut on at least four occasions. A smaller ditch branched off its western side and extended beyond the edge of the area, terminating within the adjacent part of the Conveyor excavation area.

Undated enclosure 4096/4112

- 1.2.90 The only archaeological feature exposed to the east of boundary ditch 4110 was part of a ditched enclosure. Much of the enclosure lay beyond the northern edge of the excavation area, but it was clearly circular or oval in plan and had a diameter of at least 48 m. The enclosure ditch had been recut on a single occasion, the ditch measuring c 1.7 m wide and 0.4 m deep in both phases, and was continuous, with no evidence for an entrance within the area of the excavation. The character of the ditch fills was recorded as being similar to those of ditches of Roman date elsewhere within this area, and it is likely that the enclosure dates from the Roman period, but it is uncertain how it relates, functionally or chronologically, to the activity in the western part of this area.

Palaeochannels

- 1.2.91 Two circuitous features (5008, 5009) that were recorded in the eastern part of Area 3 are likely to be parts of a complex of former channels of the Hardwick Brook.

Area 4 (Fig. 14)

Middle Iron Age

- 1.2.92 The only feature in Area 4 that was attributed a middle Iron Age date was a ring ditch (8771) in the northern part of the area. This is a rather isolated feature, located some 400 m from the nearest contemporary features, which were recorded in the eastern part of Area 3. It differs significantly from the ring gullies in that area, in having a deeper ditch and a much smaller diameter, and is unlikely to represent the remains of a roundhouse, but its function is uncertain. Evidence was recorded for three phases of this structure, the earlier two of which are likely to be of Iron Age date. The earliest phase had been largely destroyed by the digging of the subsequent re-cuts and only small parts of it survived on the north-west side of the feature, where there was a break in the later ditches, and on the south side, where the base of the original ditch was observed below the bottom of the first recut. Sufficient survived, however, to establish that the ring ditch measured c 6.25 m in diameter and was 0.3 m deep. No artefacts were recovered from this phase of the ditch. In its second phase the ditch was dug to the same dimensions as the original ditch, with the exception that an entrance was left on the north-western side. Only the western terminal of this entrance had survived the digging of the third phase of the ring ditch during the middle Roman period (below). This terminal contained sherds of plain shell-tempered pottery of middle Iron Age date. A number of features situated within the ring ditch were investigated, but none contained any artefactual material and it is therefore not possible to be certain whether they were contemporary with the ditch. The irregular shapes of many of these feature may indicate that they were tree throw holes rather than deliberately dug pits. One of these features (9213) was particularly substantial, measuring c 3 m in diameter and 0.5 m deep, and was situated centrally within the ring ditch.

Middle Roman (2nd century-early 3rd century)

The roads

- 1.2.93 The Roman features in Area 4 were arranged on either side of Road 2 that extended across the southern part of the excavation area on a WNW-ESE alignment (Plate 2). The surviving metalled surfaces of the road and the roadside ditches all appeared to date from the late Roman period, but the spatial arrangement of the middle Roman features indicates that the road was already in existence at this earlier date. In particular, the group of conjoined rectilinear enclosures that extended eastward from Area 4 across the Head of the Conveyor and Area 5 clearly fronted onto the road, and the enclosures in the north-western part of Area 4 were aligned on the road. It is not known, however, what form the road took during the middle Roman period. It is possible that subsequent re-surfacing of the road and re-cutting of the roadside ditches during the 3rd-4th century destroyed all evidence for the earlier phases of the road, but it is also possible that these elements were a characteristic of the later period and that prior to this the road had been a less clearly defined track, lacking either metalling or ditches.
- 1.2.94 A secondary road or track (Road 4) that branched off the north side of Road 2 at right angles to it is also likely to have formed an important topographic feature within this part of the settlement. The road was represented by a rather intermittent metalled surface and extended toward the north-east for c 95 m before petering out. Whether this was where the road had originally ended or, if not, what its ultimate destination was, is uncertain. No dating evidence was recovered from

the road surface and it was not certain how long-lived a feature it was, or to which part of the development of the settlement it belonged. Origin within this phase of the settlement's existence is likely, but is not proven.

Features west of Road 4

- 1.2.95 The north-western part of Area 4 was occupied by a group of enclosures and associated pits and boundary ditches. These features appeared to be aligned on the line of Road 2, although the road itself lay beyond the southern edge of this part of the excavation area. The most substantial feature in this area was a large, sub-rectangular enclosure (4843). The enclosure ditch was of at least two main phases, enclosing an area of c 55 x 45 m, and there were indications of three separate cuts along the south side of the ditch. The south and west sides of the enclosure were fairly regular, but the north side was rather erratically curved. The ditch enclosing the eastern side could not be identified, although this may simply be because it had been destroyed by the ditch of later enclosure 4844. The terminal at the eastern end of the northern side was substantial and well-defined, with a short south-facing in-turn. It presumably marked one side of a north or north-eastern entrance into the enclosure. There was no obvious corresponding feature within the excavated area, although it is possible that ditch 4744 formed part of the entrance arrangement. This ditch defined a boundary aligned NW-SE that extended for c 35 m and bifurcated opposite the terminal of the enclosure ditch, with a north-east terminal c 5 m beyond the intersection and an arm that extended 10 m southward from the same point before turning almost through a right angle and running roughly west for a further 21 m. The exact relationship of this feature to the main primary enclosure ditch is uncertain, but both predated the principal second phase of the enclosure and they must have been broadly contemporary. No internal features can be certainly assigned to this phase.
- 1.2.96 Enclosure 4843 was adjoined on its western side by a smaller, sub-square enclosure (4841). This could have been later in date than the secondary south-east enclosure, but the interrelation of their plans suggests that the two enclosures were at least broadly contemporary. Enclosure 4841 had maximum internal dimensions of c 30 x 30 m. It was defined on the south, west and north sides by a continuous ditch, which was of at least two phases. Part of the eastern side of the enclosure was defined by a very narrow gully that was only 0.3-0.45 m wide, but the southern half of the eastern side was unenclosed, unless the adjacent side of enclosure 4843 was regarded as delimiting it. The ceramic assemblage recovered from the enclosure ditch indicated that it dated from the 2nd century, and two large but not particularly deep pits (4560, 4596) situated within the enclosure yielded assemblages of similar date. The majority of the features within the enclosure, however, dated from the late Roman period.
- 1.2.97 Two human burials (4633 and 4659) were cut into the fill of the enclosure ditch on the southern side of the enclosure. Both seem to have been placed in shallow, poorly defined graves. Grave 4633 was only c 1 m long and contained the crouched remains of a juvenile, buried on its right side facing south-west. Close by to the north-west was burial 4659. The remains, this time of an adult, were better preserved than those in grave 4633, but had similarly been interred with the legs flexed. This time the head was to the south-east, and the right arm was bent up above the top of the skull. No dating evidence was recovered in association with either burial.

- 1.2.98 West of the enclosure a larger more irregular area was enclosed on the south and west sides by an angled ditch (4840) that was broken by an entrance a gap 1.5 m wide. The eastern end of the ditch terminated in line with the south-western corner of the enclosure and 7.5 m south of it, and it is likely that they were laid out as part of a single arrangement of boundaries. The northern side of this area was defined by a very straight boundary ditch (4839) that extended for some 62.5 m from the western edge of the excavation area. A spur ditch (4496) which extended from the north-west corner of enclosure 4841 was clearly associated with this boundary, with an entrance gap c 2.7 m wide between them. Some 8-9 m further south-east a short length of ditch (4438) ran roughly parallel to 4496 and is likely to have belonged to the same general scheme of layout. None of the features situated within the area of the enclosure could be securely attributed to this phase.
- 1.2.99 A total of seven pits located in the southern part of this area of the excavation, between the enclosures and the road to the south, were attributed to this phase. The pits were typically c 0.5 m deep and contained within their fills fairly substantial assemblages of pottery, perhaps indicating that they had been used for disposal of domestic refuse. Pit 4658, however, which lay partly beyond the southern edge of the excavation area, was 1.5 m deep, and is therefore more likely to have been a waterhole.
- 1.2.100 The only significant boundary in the area between these enclosures and Road 4 that could be attributed to this phase was defined by ditch 5743. This feature extended on a rather anomalous NE-SW orientation that ran somewhat obliquely to the orientation of the other contemporary boundaries, and was truncated at its north-eastern end by a group of later ditches. Pits were scattered on either side of the ditch, but the majority were undated. One large pit (5792) located between the ditch and Road 4, however, contained a substantial quantity of 2nd century pottery and part of a ceramic Venus figurine.
- 1.2.101 Also during this phase, ring ditch 8771, which had been constructed during the middle Iron Age and was located in the northern part of this area, 10 m north-west of the end of Road 4, was re-dug. This third phase of the ring ditch was slightly larger than the earlier versions, measuring c 7 m in diameter, but had an entrance in the same location on the north-western side as in the second phase. The ditch itself was considerably more substantial than in the earlier phases, with a depth of up to 0.8 m.

Enclosure 9406

- 1.2.102 A large, ditched enclosure (9406) was situated in the northern part of the area. The enclosure was roughly oval in plan, contrasting markedly with the character of other enclosure ditches in this area, and measured c 87 x 80 m, its north-eastern side lying beyond the edge of the excavation area. The enclosure was defined by a slightly irregular ditch that measured 1.2-1.7 m wide and up to 0.6 m deep. The ceramic assemblage from the ditch was small but indicated that its infill dated from the 2nd century. The only features identified within the enclosure were tree-throw holes of unknown date. The absence of associated features and the proximity to the Hardwick Brook are consistent with an interpretation as a stock enclosure.

Area east of Road 4

- 1.2.103 The arrangement of the central part of Area 4 during the middle Roman period is currently only poorly understood. During the 3rd-4th century a series of conjoined, rectangular enclosures were located in this area, and it is possible that earlier versions of these enclosures were present from the 2nd century and that the evidence for their ditches has been destroyed by redigging of these boundaries during the later phase. However, it is equally possible that this area was not subject to any formal division at this time, leaving a largely open space that extended from Road 4 to the enclosure defined by ditches 13296 and 13298 at the eastern edge of the excavation area, and was bounded to the north by enclosure 9406 and to the south by Road 2.
- 1.2.104 Evidence for at least two roundhouses (8817, 10621) was identified within this area, although each building was represented only by a partial ring ditch. Both were set back c 40 m from the line of Road 2. Only the south-western quadrant of ring gully 8817 survived, in an area where a cluster of pits had been dug. It contained a small quantity of 2nd century pottery and was concentric with a second, outer gully (8818) that appeared to join a short linear gully to the north of the structure. This outer gully may represent a distinct phase of the building or a small compound around it. Roundhouse 10621 was situated c 40 m east of roundhouse 8817. The surviving part of the building comprised an arc of gully amounting to perhaps a quarter of the original circuit, lying on its north-eastern side. A line of small postholes was identified in the base of the gully, suggesting that the walls of the structure were constructed from closely-spaced posts.
- 1.2.105 Only a small number of the many pits identified in this area could be attributed to the middle Roman period. They were generally situated within c 50 m of Road 2, with the exception of pit 9995, which was particularly large, measuring c 5 m in diameter, but was nevertheless only 0.6 m deep.

Rectilinear enclosure at the eastern edge of Area 4

- 1.2.106 A sequence of three intercutting ditches (13296, 13297, 13298) was recorded at the eastern edge of the excavation area that defined successive phases of the western side and part of the northern side of a rectilinear enclosure that fronted onto the north side of Road 2. This represented the western limit of a block of such enclosures that extended across the Head of the Conveyor and Area 5. The enclosure was bounded on its southern side by the roadside ditch and measured c 50 m NE-SW. Most of the interior of the enclosure lay beyond the eastern limit of the excavation, but the part that was exposed included a number of features, including a ring gully (9663) that is likely to have been part of a roundhouse. The ring gully was situated within the south-western corner of the enclosure, and, as with the similar features to the west of the enclosure, only part of the circuit survived. It cut two linear gullies that may represent earlier phases of the enclosure boundary and which contained pottery of 2nd century date. The projected circumference of the ring gully would have intersected with ditch 13296, the earliest phase of the enclosure boundary indicating that it is likely to be contemporary with one of the subsequent phases. An L-shaped ditch (13030) that lay a short distance east of the roundhouse may have formed a subdivision within the enclosure, and an alignment of postholes was identified to the north of the roundhouse, although no dating evidence was recovered in association with it.

South of Road 2

- 1.2.107 The area south of Road 2 appeared to have been little used during the 2nd century. Much of this area was open space, but a burial monument comprising a grave (6923) within a circular ring ditch (6952) was situated toward the western end of the excavation area. The grave pit (Plate 3) was quite substantial, measuring 2.95 x 1.69 m, and was oriented north-south. Postholes were identified in three of the corners of the grave pit, as well as one mid-way along the western side, which appeared to be evidence for either a timber lining or some form of superstructure over the grave, and some very poorly-preserved indications of planking were extant on the base of the chamber. The chamber contained the poorly-preserved burial of an adult male (6881) who had been laid on the base of the west side of the chamber, accompanied by a copy of a Dragendorff 33 cup of 2nd century date and a chicken. The individual may have suffered from scoliosis (curvature of the spine), and had received a peri-mortem injury from a sharp-edged implement that had removed part of the left mastoid process and may have been the cause of death. The ring ditch that surrounded the burial measured 1.3-1.9 m wide and 0.5 m deep and had a diameter of 15 m. The existence of a mound over the burial was suggested by the alignment of a later ditch that cut across the ring ditch but curved as if to avoid a central feature. A group of nine square pits arranged in three rows were situated immediately outside the entrance and may have been associated with the burial. The pits typically measured 2.5 m across and no more than 0.3 m deep and were very closely spaced, each one very slightly intersecting with its neighbours. Few artefacts were recovered from the pits, and their function was uncertain, but the pottery assemblage indicated that they may have been dug over an extended period of time, spanning the 2nd-late 3rd century.
- 1.2.108 A scattering of pits of varying size was distributed across the area south of the road, of which ten have been attributed to the 2nd century, although there were numerous undated pits that could also date from this phase.

Late Roman (mid 3rd-4th century)

The roads

- 1.2.109 The surviving metalled surfaces of Road 2 and the associated roadside ditches all date from the late Roman period. The road extended across the southern part of the area on a WNW-ESE orientation, comprising two distinct alignments that joined at a distinct angle c 55 m from the western edge of the excavation area. A sequence of up to three separate surfaces was identified, each comprising gravel and limestone cobbles and bedded on a layer of sand.
- 1.2.110 The eastern part of the road was flanked on both sides by roadside ditches, which presumably served as drains and also defined the limits of the carriageway. The ditches on the north side of the road were integral to the adjacent enclosures, defining their southern boundaries, but on the south side this does not seem to have been the case. The ditches did not, however, extend to the west of the change in the alignment of the road, which also corresponded with the western limit of the associated enclosures. The ditches had been recut on a number of occasions; a sequence of at least three phases of ditch were identified flanking the north side of the road and four on the south side, resulting in a broad band of disturbance up to 9 m wide that may have destroyed any evidence for ditches associated with the putative 2nd century phase of the road.

- 1.2.111 Road 4, which branched off the north side of Road 2, is likely to have been in use during this phase. Although no dating evidence was recovered from the road surface, the similarity of the construction of its metalled surface to those of Roads 1 and 2 may indicate that it was constructed at a similar date. Like Road 2, however, Road 4 may have had an earlier, unsurfaced, phase.

Features west of Road 4

- 1.2.112 Enclosure 4843, which had been constructed during the 2nd century, was overlain during the 3rd-4th century by a slightly more regularly rectilinear layout of boundaries. Most of the area of the former enclosure was now occupied by a sub-square enclosure (4844) that measured c 40 x 40 m, with a well-defined sub-enclosure within its north-western corner that measured 20 x 13.5 m. A perforated frontal bone from a young adult female was recovered from the basal fill of the ditch enclosing the north-western corner of the sub-enclosure. The ditch that extended from the sub-enclosure to enclose the western side of the main enclosure was broken in several locations, and it is not clear whether the ditch was genuinely discontinuous at this point or was simply very poorly preserved. However, the absence of evidence for an entrance elsewhere in the perimeter of the enclosure suggests that the entrance was now probably located in this area. Two gullies (4537, 4731) may have been internal features in this phase. Gully 4537 served to subdivide the southern part of the main enclosure, while gully 4731 may perhaps have served as a drain running out through the entrance of the sub-enclosure into the larger enclosure. At the south-western corner of the enclosure the enclosure ditch turned a right angle and extended toward the south-south-west for 17.5 m before continuing beyond the southern edge of the excavation area. Ditch 4417, which lay on a parallel alignment 24 m to the south-west, is likely to have defined an associated boundary, perhaps forming an enclosure adjoining the southern side of enclosure 4844.
- 1.2.113 Pits of varying sizes were distributed across this part of Area 4, both within and outside the enclosures. The functions of these pits are uncertain, although the deeper examples would undoubtedly have penetrated the water table and so may have been dug as waterholes. Three of these features were stone-lined wells (4532, 4558, 4820). Some indication of the shallow depth required to reach the water table is provided by the dimensions of these wells, which were 0.6-0.75 m deep. The wells were widely distributed; wells 4532 and 4558 lay to the west of enclosure 4844, well 4532 being situated adjacent to 2nd century boundary ditch 4840 and well 4558 within the south-eastern corner of enclosure 4841. It is uncertain, however, whether these enclosures were still in existence by the 3rd-4th century or whether the wells and other pits were dug in an area that was by this time open. Well 4558 was of interesting construction, comprising the use of both stone and timber. A limestone slab base was partly overlaid by a single square frame of roughly shaped oak, the timbers crudely lap-jointed. Above this the shaft had a lining constructed of limestone. The upper fill contained much stone, representing the destroyed upper part of the lining, and pottery of late 3rd-4th century date. Well 4820 was situated some distance from the other features in this area, near the north-western limit of the excavation area. Pit 4441, which was situated at the northern edge of the distribution of features, was of some note as, in addition to the usual 3rd-4th century pottery types, it produced sherds of late Nene Valley colour-coated ware and midlands shell-tempered ware suggesting a 4th century date for the fills.

- 1.2.114 Adjacent to the western side of Road 4 lay a long, rectangular enclosure measuring 50 x 16 m and, rather unusually, defined along part of its western side by a fence line represented by a row of postholes (6019). At its north-western end lay an enclosure with a more square shape, which was defined by ditches 9141 and 9413 on its western and southern sides and by the road on its eastern side, and appeared to be open to the north-west, where ring ditch 8771 lay. At the south-western end of this complex of enclosures, on the road frontage, lay a horseshoe-shaped enclosure, with a curved south-eastern end and an open north-western end. Within this enclosure lay a particularly dense concentration of pits.

Area east of Road 4

- 1.2.115 The group of conjoined rectilinear enclosures that had been established during the 2nd century, extending from the eastern edge of Area 4 across the Head of the Conveyor and Area 5, had passed out of use by the 3rd century. A new complex of enclosures was now constructed, possibly to replace them, in the formerly unenclosed area in the central part of Area 4 north of Road 2. These enclosures appear to have been in use for some considerable period of time, and evidence was identified for three distinct stages in their development, the latest of which was associated with pottery that post-dated AD 270.
- 1.2.116 The earliest phase of this enclosure complex consisted of at least two, and probably three conjoined rectilinear enclosures. Two of these enclosures were situated in the area formerly occupied by roundhouses 8817 and 10621 and comprised a southern enclosure that fronted onto Road 2 with a northern enclosure to the rear. The roadside ditches that defined the north side of Road 2 also served as the southern boundary of the southern enclosure. The two enclosures were of equal size, each measuring c 63 x 50 m. The ditch that divided the two enclosures (10509) terminated 1 m short of the ditch that defined their western boundary (8223) but it was uncertain whether this opening represented a narrow entrance that allowed pedestrian passage between the enclosures or indicated the presence of a bank alongside the western boundary ditch. The southern enclosure was further divided into two unequal parts by a ditch (8221) that branched off ditch 10509. The southern enclosure was adjoined on its eastern side by a third enclosure that is likely to have been contemporary, although the stratigraphic relationship between the two had been disturbed by the digging of later phases of the enclosure ditches. Like the southern enclosure, this south-eastern enclosure fronted onto Road 2 and was delimited on its southern side by the roadside ditch. It was slightly trapezoidal in plan and was somewhat smaller than the other two enclosures. At the road frontage it was 40 m wide, but at the rear of the enclosure, some 50 m from the road, this width had increased to 48.5 m. A group of less substantial ditches that extended parallel with the western boundary of the enclosure may represent successive phases of redefinition of the boundary, albeit on slightly different alignments.
- 1.2.117 A further two conjoined enclosures were subsequently added to the northern side of this group of three enclosures, extending across the area formerly occupied by large oval enclosure 9406. The precise extent of the additional enclosures was not established, as they extended beyond the excavation area, but they certainly comprised a smaller southern enclosure that measured 60 x 30 m and a northern enclosure that was similarly 60 m wide and extended for at least 50 m. The ditch defining the southern boundary of the southern enclosure (9954) had been dug along the same alignment as the ditch that had defined the northern limit of the

initial group of three enclosures and the eastern boundary continued the alignment of the corresponding boundary of the earlier enclosures. The western boundary of the new enclosures, however, was slightly off-set from that of the earlier enclosures. Some relatively insubstantial ditches within the eastern parts of these enclosures may have represented further internal subdivisions.

- 1.2.118 The final phase in the development of these enclosures comprised the redefinition of some of the existing boundaries. The fills of these recut ditches were associated with some of the latest groups of pottery from the site, as well as with a group of objects of certain or possible religious/ritual function: a miniature stone altar (SF 5960), a damaged sculpture of a Mater-type goddess (SF 5810, Plate 4), and a hand-moulded head from an Oxford colour-coated ware flagon (SF 5908, Plate 5). The northern of the two later enclosures appeared to have been abandoned at this stage, but the ditch enclosing its companion was re-dug, with the possible exception of the eastern part of its northern side, as was the eastern side of the original northern enclosure (9955). The ditch that had divided the two original enclosures was also redefined, with the exception of its western end, which was now re-aligned to curve southward, enclosing an area that was bounded to the east by ditch 8221, which was also redefined, and to the south by a fence line represented by a row of postholes (8237). A small apsidal-ended building (8371) was situated in the south-eastern corner of this enclosure. The walls of the building were defined by a shallow beamslot that survived to a maximum depth of only 0.1 m and had been completely truncated on the eastern side. A small group of stakeholes was also identified along the line of the western wall. The building appeared to be single-celled and measured 4.3 x 3.3 m, with straight western and southern sides and a curved northern end. No floor surfaces survived. The function of this building was uncertain. A possible clay surface (8520), somewhat irregular in shape and measuring 4 m across, was situated immediately outside the southern wall of the building and may have been associated with it. A neonate burial was situated within the building, and a further three such burials lay to the south, but it is not certain whether they were contemporary with the structure.
- 1.2.119 Two features within the central part of this complex produced fragments from pipeclay Venus figurines. Pit 10141 contained the feet of such a figurine, and a small fragment from a second figurine, comprising part of the base, was recovered from ditch 10255. Pit 10141 produced numerous other small finds as well as part of a small basket of plant fibre (see Appendix C 14).
- 1.2.120 Between this complex of enclosures and Road 4 lay a large triangular area measuring some 100 m NW-SE. During the late Roman period this area was characterised by a proliferation of quarry pits, which were particularly dense in the north-western third, where they merged into large, amorphous pit complexes.

South of Road 2

- 1.2.121 The earliest boundary to be established south of the road was defined by a single ditch (5524) that branched off the southern roadside ditch and extended toward the south-west, eventually continuing beyond the southern edge of the excavation area. Its fill contained an assemblage of more than 2 kg of pottery that indicated that the ditch was silting up during the second half of the 3rd century.
- 1.2.122 A large rectangular enclosure similar to those on the north side of the road was subsequently established to the west of this boundary, the ditch that defined its

eastern side intersecting very slightly with the western edge of ditch 5524. The enclosure measured 60 x 35 m, with its long side parallel to the road, and its western and eastern ends were aligned with those of the corresponding enclosures on the north side of the road. Unlike the enclosures adjacent to the northern side of the road, which used the roadside ditch as their southern boundary, this enclosure was set back slightly from the road and was entirely discrete. The enclosure ditch had been recut on a single occasion. The only features within the enclosure were a small number of pits of unknown function. Although the artefactual assemblages from the enclosure were generally of modest size, larger groups of pottery were recovered from the eastern ditch, and pit 5299 contained a discrete dump of more than 4 kg of pottery in fairly fresh condition.

- 1.2.123 At the same time as the enclosure was constructed boundary ditches were established for the first time in the area to the west. A ditch (6197) was dug that branched off the south-western corner of the enclosure and extended westward, cutting across the ring ditch surrounding burial 6923. Like the enclosure ditch, ditch 6197 was of two phases. A distinct kink in this ditch as it crossed the interior of the ring ditch may indicate a deliberate attempt to avoid slighting a mound over the grave itself. The space between this ditch and the road appeared to have been left open, but the area south of the ditch was further bisected by a second ditch that branched off the southern side of ditch 6197 and extended for c 40 m before terminating. Two particularly substantial pits (6278, 6314) were situated in the area west of this ditch, both of which measured more than 0.8 m deep and may have been used as waterholes. Each of these features contained more than 3 kg of late Roman pottery, and pit 6278 also contained a fragmented dodecahedron.

Buildings 7038 and 7219

- 1.2.124 Two of the latest elements of the occupation of this part of the site were a pair of rectangular, stone-founded buildings (7038 and 7219). Both buildings were constructed on a NNE-SSW alignment, perhaps due to the influence of the alignment of the adjacent enclosure. The southern end of building 7038 (Plate 6) overlay part of ring ditch 6952, but did not disturb the associated burial nor, probably, its overlying mound. The building measured 10.5 x 5.8 m and comprised a foundation of ragrock set in a trench that measured 1.1 m wide and up to 0.3 m deep. The foundation was composed mainly of rubble, of which three courses survived, although some evidence for pitched stone construction was observed. The foundation had been partially robbed out, particularly on the southern and western sides. A layer of silt 0.06 m thick that filled the area within the building produced more than 1 kg of late 3rd century pottery and some animal bone, but the precise nature of its relationship to the structure was uncertain.
- 1.2.125 Building 7219 was constructed over the back-filled north-western corner of the southern enclosure, set back 7.5 m from Road 2. It was a little smaller than building 7038, measuring 9.25 x 5.0 m, and was of similar construction. The south-eastern corner was damaged in machining the site and a substantial part of the western wall had been removed by stone-robbing. Much of the foundation appeared to be rubble, although pitched stone was used on the southern side. The bottom course of both the south and north walls was partly preserved, set on a thin layer of mortar. A sequence of layers was recorded within the building that was not very productive of finds. A possible courtyard area was identified adjacent

to the north-western corner of the building, comprising a sequence of gravel and rubble surfaces interleaved with silt layers.

Burials

- 1.2.126 A total of fourteen inhumation graves and seven cremation burials were identified in this area, and small quantities of human bone, some of it cremated, was recorded from a number of non-funerary features. Most of these burials were not intrinsically dateable, with the exception of grave 6923, which was accompanied by a 2nd century vessel, graves 4633 and 4659, which were dug into a 2nd century enclosure ditch, and grave 10392, which was dug into an infilled late Roman enclosure ditch. No evidence was found for formally defined areas that were reserved for burial, although burial 6923 was enclosed within an annular ring ditch (above). The largest single concentration of burials comprised a group of three inhumation graves and five cremation burials that lay adjacent to the eastern boundary of the complex of conjoined enclosures east of Road 4. These burials were situated within an elongated triangular area defined by two converging boundary ditches, although it is not certain that these boundaries were contemporary. A group of four burials of neonates were clustered around the southern end of building 8371, and there were two instances of pairs of closely spaced graves: graves 4633 and 4659, which have just been referred to, and graves 9724 and 9838, which lay alongside a boundary ditch within the eastern boundary of the complex of conjoined enclosures east of Road 4.

The Head of the Conveyor (Fig. 15)

- 1.2.127 The Head of the Conveyor was situated at the south-eastern end of the conveyor, in the southern part of the Phase 2 area, east of Area 4 and south of Area 5. It lay adjacent to the western side of the realigned Hardwick Brook, and encompassed an area of c 0.65 ha. Excavation of this area exposed a metalled road and adjacent enclosures.
- 1.2.128 The projected line of Road 2, which was recorded in Area 4 (but whose existence was unknown when this work was undertaken in 2004), passed just south of the Head of the Conveyor. No surfaces associated with Road 2 were identified in this area, but ditches 4315 and 4325, which formed a single alignment that extended WNW-ESE across the southern tip of the area, are likely to have formed part of the roadside ditch on its northern side. Within the Head of the Conveyor area both ditches turned a right angle and extended toward the north east, flanking another road (Road 3, 4341) that branched off Road 2 and extended in this direction, continuing beyond this area and across Area 5. Road 3 had a well-built metalled surface. The road structure was of several phases. At the base of the sequence a ridge of very compacted orange-yellow sandy silt with iron panning may represent either a surviving fragment of an earlier surface or a subsoil overlying the natural gravel. This ridge extended along the centre of the road and survived to a width of 1.0-1.4 m. On either side of this ridge were ruts or hollows that may have been scoured out of the underlying material by the passage of traffic. Within these ruts lay a compacted layer of worn limestone cobbles, with a suggestion that the kerbs were indicated by larger stones. The total width of this road was c 4.3-4.5 m. This surface was overlain by a deposit of sandy silt with small gravel which filled the hollows to the level of the top of the central ridge. This material also sealed the fill of the earliest phase of the eastern roadside ditch (4325). Above this, the upper

road surface was composed of worn limestone blocks and cobbles in a matrix of light grey silt, the latter probably including a component of limestone degraded through wear of the road surface. This surface ranged from 5-6.5 m in width and was up to 0.24 m thick. The upper part was directly overlain by the modern ploughsoil and had clearly been damaged by ploughing. No artefacts were recovered from the sequence of surfaces, and the only material recovered from the associated ditches were two sherds of 2nd century pottery from the upper fill of the western roadside ditch. Fragments of desiccated wood were also seen in the latter fill.

- 1.2.129 Road 2 was adjoined on its northern side by part of a complex of conjoined rectilinear enclosures that also extended into Areas 4 and 5. Parts of two enclosures were exposed on the western side of Road 3. Most of the enclosure situated within the junction of the two roads lay within the excavated area, apart from its south-western corner, as well as part of the adjacent enclosure to the west. The ditches that defined these enclosures had been recut several times, resulting in a rather complex stratigraphic sequence. The boundary defining the northern side of the enclosure situated within the junction of the two roads showed evidence for at least five phases, and that delimiting the northern side of the adjacent enclosure had been recut on at least two occasions, while the ditch that divided the two enclosures had been recut once. Artefactual evidence from these features was sparse, but was mostly of 2nd century date, although pottery dating from the 3rd-4th century was recovered from the fills of the recut of the ditch that divided the two enclosures. Little evidence was identified for activity within the enclosures. Two gullies (4283, 4328) within the western enclosure may have served to sub-divide it, and a small number of pits were scattered throughout the area, most of them lying within c 25 m of Road 2. Most of these pits contained late Roman pottery, and two (4271, 4337) were substantial enough to have served as waterholes. Pit 4257 produced 18 kg of pottery, almost entirely from a single large vessel of pink grogged ware.
- 1.2.130 The boundary that divided the two enclosures continued beyond the north-eastern limit of the Head of the Conveyor area (4251), and evidence from Area 5 indicated that it defined a linear boundary that extended on an alignment roughly parallel with Road 3, rather than indicating the presence here of further enclosures. To the west of this boundary lay what appeared to be an open area, within which the only feature identified was burial 4262, which lay within a small square ditched enclosure. The grave pit measured 2.15 x 0.58 m and was -only 0.04 m deep. The skeletal remains within it were very poorly preserved, and were represented only by a few teeth and fragments of long bones from an adult of undetermined sex. A fragment of extremely desiccated wood measuring 0.52 m long was recovered, which had clearly formed part of the west side of a coffin. No other evidence for the coffin was present, either in the form of further traces of wood (for example in the base of the grave) or of coffin nails. The enclosure around the burial measured c 3.5 m across and was defined by a gully that measured 0.28-0.45 m wide and was no more than 0.1 m deep. No artefactual dating evidence was recovered from either the burial or the enclosure, but the character of the burial, as well as its common alignment with the field system, suggested a Roman date.
- 1.2.131 The area stripped to the east of Road 3 did not extend far enough to establish whether further enclosures lay here, but it is likely that this was the case as more

enclosures were recorded to the east of this area in Area 5. Two pits were the only features identified in the limited part of this area that was examined.

Area 5 (Fig. 15)

- 1.2.132 The NNW-SSE aligned Road 2, which had been identified in Area 4, extended across the southern part of Area 5, although here it lacked a metalled surface and was represented only by the two roadside ditches (12954, 12600), which defined a broad thoroughfare c 20 m wide. The southern ditch (12600) terminated within Area 5 but the northern ditch (12954), which unlike its companion had been recut on two occasions, extended across the entire width of the excavation area and continued beyond its eastern edge.
- 1.2.133 This excavation area exposed more of the series of conjoined rectilinear enclosures on the northern side of Road 2 that had been seen in Area 4 and at the Head of the Conveyor. Four such enclosures were entirely or mostly exposed within Area 5, as well as part of a fifth at the western end of the area. They measured 51-55 m NNE-SSW and 40-42 m wide NNW-SSW, and their regularity suggests that they were laid out as a single act. The western enclosure, which extended beyond the excavated area, differed somewhat from those to the east. It appeared to have been twice as wide, and the enclosure ditch had been redefined as many as three times. Although a number of possible features were investigated within the enclosures, only a single pit (12849) was identified, the others being interpreted as tree throw holes. No features were identified to the south of the road.
- 1.2.134 Road 3, which extended across the Head of the Conveyor area, continued across Area 5. Its orientation in this area was NE-SW rather than the NNE-SSW direction seen at the Head of the Conveyor, indicating a significant change of alignment between the two excavation areas. As in the Head of the Conveyor, it was represented by a metalled road surface (12160) flanked on either side by drainage ditches (13163, 12164). There was some evidence that the eastern ditch had been dug in segments, and in the north-eastern part of Area 5 a second ditch (12165) was identified beside the western ditch (12163). This may represent a separate phase of the roadside ditch, dug on a slightly different alignment.
- 1.2.135 Boundary ditch 12049 extended NW-SE across the area on an alignment similar to that of the road, and formed part of the same boundary as ditch 4251 in the Head of the Conveyor. Finds from this ditch included a spearhead.

Summary of the character and significance of the Gill Mill complex

- 1.2.136 The significance of the site lies in two main aspects: the scale of examination and the character of the archaeology revealed. With regard to the former, the Phase 1 works have covered a total of c 73 ha (of which c 14 ha have been stripped and recorded under 'watching brief' conditions and the remainder examined by trenching), while in Phase 2 some 35 ha have been examined to date, using a strip, map and sample approach.
- 1.2.137 The archaeological sequence of this part of the Windrush valley thus revealed has produced significant negative evidence for use of this Thames tributary through prehistory, with unusually little indication of activity prior to the middle Iron Age, and dispersed small-scale settlement (four sites, perhaps all broadly of 'Farmoor type' (Lambrick and Robinson 1979), reflecting seasonal use of the

Windrush floodplain) in that period. Late Iron Age-early Roman activity has only been certainly located in one restricted area. The principal focus of archaeological interest, therefore, is a substantial Roman settlement that seems to have been established in the early 2nd century AD. Its core area, of which roughly half has been examined (the remainder lying beneath the present-day Gill Mill House, which occupies an 'island' in the middle of the quarry), covered a minimum of c 10 ha and comprises a complex network of enclosures based around two main paved roads, the first (Road 1) running NE-SW across the valley, in part through the exclusion zone around Gill Mill itself, and the second (Road 2), roughly at right angles to the first, running ESE down the valley from a probable junction with Road 1 just north of the present-day Gill Mill. A third road (Road 3) ran north-eastwards from the line of Road 2 from a junction beyond the eastern margin of the main focus of settlement. It is worth noting that the identification of roadside ditches in SLGM Areas 1 and 2 as being related to Road 1 may well be justified, but it is an unproven assumption (see further below). Watercourses will have been a further very important element of the settlement layout. There is some reason to believe that the complex pattern of modern watercourses seen in this part of the Windrush Valley is broadly similar to that of the Roman period, in which case Road 1 will have crossed a minimum of four separate streams within and immediately adjacent to the settlement, and some of these crossings might have involved minor changes in road alignment. In addition it is likely that Roads 2 and 3 extended at least beyond the line of the Hardwick Brook. The nature of the watercourse crossings is not known. Some evidence for probable paved fords was recovered away from the main Roman settlement area, but these features are undated and need not have been Roman.

- 1.2.138 The settlement form is of some interest. There are suggestions of fairly regularly laid out plots on the west side of Road 1 in DUGM Areas 2 and 4. Probably at least two stone-founded buildings lay within these plots in the former area. A particularly regular arrangement of ditched plots is also seen on the north side of Road 2 at the eastern edge of the settlement, extending from SLGM Area 4 right across Area 5. It is striking that the layout of the more 'central' parts of the settlement adjacent to the likely junction of Roads 1 and 2 (in DUGM Area 9 and SLGM Area 4) appears considerably less regular. A large open area to the west of the junction, perhaps to be seen as a market place, was surrounded by rectilinear plots, but with no obvious overriding scheme of organisation, while enclosures in the extreme south-east corner of DUGM Area 9 are difficult to understand but may have some bearing on the precise alignment of Road 1. If the latter followed the 'direct' line suggested by the cropmark features seen in the field next to DUGM Area 4 (see above) the junction of Roads 1 and 2 presumably lay just east of Area 9, with the enclosures just mentioned lying immediately adjacent to the west and therefore quite narrow. Another possibility is that the cropmark evidence is illusory (perhaps relating to modern features), in which case the line of Road 1 east of DUGM Area 4 could have lain slightly further west, running into the southern part of Area 9 west of the enclosure in its south-east corner. This enclosure might then have been positioned in the south-east angle of the junction between Roads 1 and 2, rather than west of that junction. On this interpretation, Road 1 would have opened into the possible market area, but then passed through it on an irregular course, exiting through the east side of Area 9 (at the point of the likely junction with Road 2) before resuming its NNE course just east of Area 9, very close to the present driveway to Gill Mill House, and connecting with the alignment seen in SLGM Areas 1 and 2.

- 1.2.139 That the major road alignments were not necessarily straight is demonstrated clearly in SLGM Area 4. Here there was a slight but significant change of alignment in Road 2 at the point where it encountered a major group of SSW-NNE aligned boundary features, which eventually included the west sides of the most clearly defined group of late Roman enclosures in this part of the site. The underlying significance of the change of alignment is unclear, but the only two stone buildings encountered in this area lay adjacent to this point, and systematic separation of the road and adjacent enclosures by means of ditches, routinely encountered further east, seems to have ceased here. The basis of spatial organisation on the north side of Road 2 and west of this point is unclear, although some enclosures were present in both 2nd and 4th century forms, but it is unknown if they extended as far south as the road frontage or were exclusively set back from it.
- 1.2.140 Structural evidence in SLGM Area 4 north of Road 2 seems to have related entirely to scattered buildings of timber, and perhaps other non-durable materials (such as cob), and none of these structures lay closely adjacent to the road frontage. In this regard the evidence from DUGM Area 2 comes closest to reflecting the pattern considered to be most characteristic of 'small towns'/roadside settlements. In contrast the picture from SLGM Area 4, even allowing for the one stone based building that did lie in a relatively close roadside location, suggests more dispersed buildings, mostly, but perhaps not all, within individual enclosures, a pattern which is more characteristic of strictly rural settlement types. Notwithstanding the widely recognised difficulty of identifying structural evidence of any kind on Roman rural settlements in the Upper Thames Valley, it is likely that the regular plots fronting Road 2 east of the settlement nucleus (in Area 5) never contained buildings, even if they had originally been intended to do so (which itself is far from certain).
- 1.2.141 The likelihood that most buildings at Gill Mill were constructed of perishable materials is supported by the scarcity of ceramic building material. Careful study of the distribution of this material, and of stone roofing material, will shed further light on this question, but it is unlikely that (as on some rural sites in the region) such material was entirely recycled from elsewhere. The few (on present evidence) stone-founded buildings probably stood in stark contrast to the majority of structures at Gill Mill, however. The presence of fragments of box flue tile (from a hypocaust), and perhaps particularly the presence of tesserae in a pit in DUGM Area 4, suggest the existence of at least one building of some architectural pretension. Whether this was a domestic building or served a communal function, such as a small bathhouse or a temple/shrine structure, is unknown, but the number of pieces of carved stonework of religious character certainly suggest the presence of a temple/shrine, whether or not it contained a mosaic pavement or was accompanied by a modest bath building. In regional terms, one or more temples were typically the only 'public' buildings to be found in small towns and other nucleated settlements, and on this basis alone the presence of such a building at Gill Mill is to be expected.
- 1.2.142 The evidence of settlement morphology and structures therefore suggests a site of composite character, with occupants of varying status within a lower to middling status range. The lack of an overtly high status element is confirmed by all aspects of the evidence for structures and artefacts. The nature of economic activity is therefore fundamental to understanding the *raison d'être* of the settlement in terms of its location, extent and chronology. Negative evidence can be summarised very

quickly. There is no sign of significant industrial production, for example of ceramics or metalwork - indeed the quantity of metalworking debris is remarkably low. The evidence of plant remains, while substantial, does not reflect anything more than domestic consumption and the indications of associated technology, including a very few querns and a single millstone fragment, are again very scarce. It is very likely that the principal economic activity at the site related to cattle rearing, which potentially reflected a long-term tradition in the area, as indicated by middle Iron Age sites such as Mingies Ditch just to the south. The animal bone assemblage is substantial and (on the basis of the assessed sample) is heavily biased towards cattle. The general environmental indicators (plant remains, pollen etc) demonstrate a setting dominated by pasture, some of it damp, that would have been well suited to raising of cattle, rather than sheep, for which such conditions are less appropriate. The extent of concentration on cattle rearing is very marked. It is not unparalleled in the Upper Thames Valley (as for example at Thornhill Farm in the early Roman period, which has similarly high representations of cattle), but contrasts strongly with all local assemblages, particularly in the late Roman period. If cattle rearing was a specialist activity focussed on Gill Mill it is of course likely that the majority of animals bred in the vicinity or acquired at market here will have left the settlement on the hoof for distribution to other more substantial market centres. The question of the basis of this activity, whether concerned with supply of the local/regional civil population or related to wider concerns such as state supply, is an important one. Further work may allow other strands of evidence to be linked with the animal bone evidence to provide a more comprehensive view of the way in which exploitation of cattle worked; aspects of the record which may be of relevance include the metalwork and pottery evidence. The former demonstrates a significant emphasis on transport, with a total of linchpins (9) more than twice as large as from any other site in the Upper Thames Valley, and a nave hoop, in addition to the important oak cartwheel fragments. Such an emphasis cannot necessarily be correlated with stock-raising, but is not inconsistent with it. One of the most notable aspects of the pottery evidence, the relative prevalence of very large jars in fabric O81, suggests another storage/transport characteristic, and the possibility that this could be related to animal products can be considered.

- 1.2.143 Importantly, the scale of work has permitted examination of the margins of the settlement and the nature of physical transitions from nucleated to dispersed rural activity. An important aspect of this relates to burial. No formal cemeteries have been identified to date, but cremation and inhumation burials have been located in small clusters, particularly at the western margins of the settlement in DUGM Areas 4, 9 and 10 (Fig. 16). Individual burials, both cremations and inhumations, also occurred sporadically within the settlement area, particularly in SLGM Area 4. A very unusual early Roman (c mid 2nd century) inhumation burial beneath a round barrow was also located here, but south of Road 2, at a point that was marginal in settlement terms but sufficiently close by to be a constant presence. The location of the mound was referenced by later Roman field boundaries and a stone building. Although the terms of these relationships are unclear it is likely that this burial had some particular significance in relation to the 2nd century settlement. Overtly religious activity is indicated by a variety of portable objects, some of considerable intrinsic interest. It is unclear if the quantity and quality of these pieces is sufficient to indicate that the religious aspects of the site had particular significance for the wider region, but this is possible. The distribution of these objects seems to have focussed in the northern part of SLGM Area 4, but

this will need to be considered very carefully alongside other evidence for exceptional material assemblages from feature fills. It is clear that the density of finds deposition in pits was extremely variable and some of the richest deposits could have been placed in a ritual context rather than simply reflecting disposal of domestic rubbish.

- 1.2.144 In terms of its relatively formal layout and chronological range (from early 2nd century onwards) the site is best paralleled in the region at Claydon Pike (Glos; Miles *et al.* 2007), but Gill Mill is at least twice as large as the Claydon Pike complex and has no other obvious regional comparanda, being morphologically rather different from the majority of other nucleated roadside settlements or 'small towns'. Further afield, sites such as Stonea, in the Fens (Jackson and Potter 1996), might be considered broadly analogous, as well as roughly comparable in extent, and originated at about the same time. Gill Mill can be described as a 'small town'/roadside settlement, but its chronological profile (not starting until the early 2nd century) and river valley bottom setting are most unusual for sites of this type and might suggest a very specific locational imperative (tentatively involving a religious focus). A concern with pasture and stock raising would not in itself have been sufficient to require the siting of the settlement in this flood-prone location. It may ultimately have been such environmental considerations that led to the abandonment of the site before the end of the 4th century. There is no evidence of post-Roman settlement within the quarry area (except for Gill Mill itself, certainly in use in the medieval period and perhaps with late Saxon antecedents) and most of the area was blanketed with alluvium after the Roman period.
- 1.2.145 On any analysis the site is of major regional significance and for the Roman period it is arguably of national importance as a significant nucleated settlement in an unusual topographical setting. In this context the Phase 1 work, while spatially less coherent than that of Phase 2, provides vital evidence for integral components of the whole settlement sequence, comprising two of the middle Iron Age settlement units (including the best preserved and understood of these) and parts of the western and south-western sides of the Roman settlement fundamental to understanding it as a whole. These include the best evidence for Road 1 and indications of roadside plots on its western side, incorporating buildings (in Area 2) and major pit clusters (in Area 9), the potential market area and a large proportion of the evidence for burials. This area has also produced some of the most important finds, of which the Genius altar and part of a waterlogged cart wheel are outstanding. Integration of the analysis of Phase 1 and Phase 2 works is therefore essential for the production of a coherent account of this important landscape.

1.3 Research aims and objectives

Original aims and objectives

- 1.3.1 The primary objective of the initial Phase 1 works was simply to identify the archaeological potential of the Gill Mill quarry area in view of the fact that much of it could not be assessed without intrusive work owing to the presence of masking deposits of alluvium. Building on the results of the Phase 1 work the broad objectives set out in the Written Scheme of Investigation (WSI) for the Phase 2 works were as follows:
- To date and phase the main features and contexts.

- To identify evidence for the character and development of the site in terms of function, settlement history (eg shifting or static) and occupation history (eg continuous or sporadic).
- To determine the nature and status of the various periods of occupation.
- To determine the character and extent and relationships between features revealed within the site.
- To obtain evidence for the economy and environment in any phase of settlement or other activity.

1.3.2 The data sets resulting from the Phase 1 and Phase 2 works clearly achieve some of these aims and objectives and provide sufficient material to allow all of the remainder (and others) to be addressed through further analysis. In fact the scale of investigation at Gill Mill permits consideration of an unusually wide range of both site-specific and wider questions, set out in more detail below.

Revised aims and objectives

1.3.3 The principal aim of the Gill Mill project is therefore to maximise the potential of the Gill Mill datasets to provide significant new evidence for and understanding of later prehistoric and Roman settlement in the region through a programme of further analysis. It is proposed that this will result in a publication which should make a major contribution both to regional studies and to knowledge of Roman rural settlement at a national level.

1.3.4 The proposed report will set out the evidence for the Gill Mill sites in terms of settlement morphology, physical character, chronology, function and aspects of society. With this foundation in place the evidence can be used as a basis for examination of the development of settlement patterns in the Windrush valley from later prehistory onwards, the role of the Gill Mill Roman settlement in the local and regional settlement pattern and economic and religious frameworks, and the degree to which the site may be regarded as typical or anomalous within these frameworks. It is anticipated that the report will contribute to debates at national level about the nature of transformation of the countryside with the Romano-British period and the role of nucleated settlements or estate centres in these processes.

1.3.5 These broad aims reflect the fundamental importance of rural settlement to the archaeology of Roman Britain (Taylor 2001; 2007, 1) and relate to both wider and more specific issues raised in Taylor's reviews. Some of the objectives outlined below also relate to topics considered in the Solent Thames Research Framework, (Fulford and Allen 2010), though general questions relating to rural settlement are not so strongly emphasised there.

1.3.6 The objectives (specific research questions; English Heritage 2006, 54) which can be defined as contributing to the achievement of these aims include the following .

Research questions: settlement morphology etc

1.3.7 Do the Iron Age features all result from activity of similar type? Are there distinctions between domestic and other activity areas?

1.3.8 Are the principal roads fundamental to the Roman settlement layout - are there any significant pre-road features?

1.3.9 Is there any evidence for modifications in road alignment during the lifetime of the settlement?

- 1.3.10 How does the settlement form evolve through time - to what extent are enclosures a characteristic of the primary layout, do they become a more dominant feature in the later Roman period (as may be the case in SLGM Area 4) and to what extent are primary enclosure/boundary alignments modified with the passage of time? What is the significance of the apparent coincidence of change of alignment of Road 2 and a major SSW-NNE ditch alignment in SLGM Area 4?
- 1.3.11 Does refinement of the chronology of pits enable us to identify temporal variation in the location of the principal concentrations of pits?
- 1.3.12 How many structures can be identified - what are the characteristics that define the 'non-obvious' buildings, given that there are very few stone-based or otherwise well-defined structures? Detailed examination of the distribution of ceramic building material and related materials will be important here. Is the presumption that the scale of the occupied area suggests the existence of more structures than are currently recognised in fact justified? Can we identify factors that might account for the absence of remains of buildings even where their presence is strongly suspected (this is a point of considerable regional importance)?
- 1.3.13 What does the variety of structural types indicate about the character of the settlement?
- 1.3.14 Can we confirm that structures are generally not placed in roadside locations - what does this reveal about the character of the settlement?
- 1.3.15 What is the relationship between peripheral areas (eg in SLGM Area 5 and particularly Area 3) and the focal settlement area? Do any of the peripheral areas contain domestic components or are they entirely supplementary to the focal area in functional terms - or are they in fact completely independent of it?
- 1.3.16 Can we refine the overall chronological/developmental sequence? In particular, exactly when is the focal settlement area established and what is its extent at this time? What is the precise chronology of the principal developments in the settlement plan (eg with regard to the establishment of new enclosures, the introduction of stone buildings etc) and do any of these changes suggest systematic rather than piecemeal development of the settlement?
- 1.3.17 What is the distribution of lined wells/waterholes and does this help define settlement/activity/areas of specific functions?
- 1.3.18 Is there any clear patterning, spatial and/or chronological, in the distribution of burials across the settlement - is it possible to suggest locations for more formal cemeteries, or were these completely absent?
- 1.3.19 What is the distribution of particular categories of material with chronological significance - eg coins of specific periods, late Roman pottery etc. Do these distributions reveal chronological variation in the patterning of settlement or other activity?

Research questions: social and economic aspects

- 1.3.20 The economic basis of the settlement seems to be closely dependent upon cattle rearing - can we qualify, quantify or refine this view (primarily through analysis of the animal bone assemblage)? More detailed characterisation of waterlogged and charred plant remains will clarify further the environmental setting of the settlement and the extent to which it was concerned with specialist stock raising - how important was arable production here?

- 1.3.21 What do the faunal remains reveal about the physical characteristics of the animals exploited here and the husbandry strategies employed? Is there any evidence for breed improvement in the course of the Roman period (cf Fulford and Allen 2010, 2)?
- 1.3.22 To what extent do aspects of the overall settlement plan and other characteristics support (or contradict) the view that a specialist economic function (cattle raising) underpins the entire site? Are there particular morphological aspects that shed specific light on this?
- 1.3.23 What does analysis of other artefactual material, particularly metalwork and pottery, add to understanding of the pastoral economy?
- 1.3.24 What other social and economic characteristics do these and other material types suggest?
- 1.3.25 The wider connections (particularly economic) of the settlement are likely to be demonstrated most clearly by analysis of the pottery (stone is also relevant - see eg Fulford and Allen 2010, 7 – but their emphasis on Stonesfield slate is misplaced (cf Henig and Booth 2000, 163). What do these reveal about trading connections and changes in their patterning through time? What is the significance of the unusually high representation of pink grogged ware and what does its distribution across the site reveal about functional aspects (both of the site and in relation to this type of pottery)? How does the relationship between the Oxford and 'west Oxfordshire' industries change - are there any connections between them or are these industries simply in direct competition as sources of supply to Gill Mill? How far do the products of the Oxford industry dominate the late Roman assemblages?
- 1.3.26 What does the pottery, in combination with other artefactual material (glass, coins, other metal etc) as well as the structural record, suggest about the status of the inhabitants of the site, and about variations in status spatially and chronologically?
- 1.3.27 Is there any evidence for use of the river Windrush as a tributary of the Thames in relation to transport and trading networks (cf Fulford and Allen 2010, 8)? Are there any other specific characteristics of the riverside location which are significant for aspects of life in the settlement (apart from adverse environmental issues such as flooding)?
- 1.3.28 What does detailed analysis of the distribution of objects of religious/ritual use, and their associations with other types of material, tell us about the nature of religious practice on the site, whether in household or more centralised contexts (cf Fulford and Allen 2010, 5 - 'the relationship between ritual and settlement is not well understood')?
- 1.3.29 Certain features (particularly pits) seem to contain much larger finds assemblages than other features of the same type. Is there patterning in the associations of types of material that occur together in these features, and what kind of activity is represented by such deposits - can any be defined as of special/ritual character? Does the distribution of features with particularly large or otherwise unusual assemblages shed further light on specific aspects of the site, such as religious practice?

Research questions: the wider context

- 1.3.30 Does the apparent economic emphasis of the major Roman settlement at Gill Mill suggest continuity of intensive pastoral activity from the middle Iron Age - and perhaps even earlier?
- 1.3.31 What is the place of Gill Mill in the local/regional settlement pattern, both in relation to the network of larger nucleated settlements (including 'small towns' on Akeman Street) and the neighbouring rural settlement pattern? Does Gill Mill fall recognisably within the range of 'small towns'/nucleated settlements as currently understood within the region (cf Fulford and Allen 2010, 3)? To what extent did Gill Mill act as a local centre with market functions, and can we clarify the existence and significance of other roles, such as potential religious centre?
- 1.3.32 Is the quality, quantity and context of the religious material sufficient to suggest the presence of a shrine with local/regional significance? How does this evidence compare with that from other sites of religious character in the region (particularly Marcham/Frillford)?
- 1.3.33 What are the implications of the early 2nd century foundation date for understanding the main Roman settlement. Given the regional context of settlement dislocation at this time does the chronology suggest a specific socio-economic rationale behind the establishment of the site, and if so, who were the instigators of this development?
- 1.3.34 What is the significance of the cessation of activity at Gill Mill before the end of the 4th century in terms of the chronologies of nearby settlements both in and beyond the Windrush valley?
- 1.3.35 What does enhanced understanding of the Gill Mill settlement contribute to debates about the identification and interpretation of potential estate centres in Roman Britain (Fulford and Allen 2010, 7; cf Taylor 2001, 56)?
- 1.3.36 All of the above questions can be addressed through further analysis of the stratigraphic, artefactual and ecofactual record. Refinement of site chronology and phasing is fundamental. The present scheme of phasing is quite broad; more detailed examination of the stratigraphic sequence integrated with improved data from pottery and coins offers considerable potential for the production of a more comprehensive and also more closely defined scheme of development for most areas of the settlement. Other aspects of the stratigraphic sequence meriting particular attention include the evidence for structures, for pits and wells/waterholes, and for burials. Again, close integration of stratigraphic and artefactual (and ecofactual) analysis will be important, particularly in relation to improving understanding of the varied functions of pits and the spatial and chronological distribution of the different pit types. Extensive recording, analysis and reporting of the key artefact and ecofact categories will form an essential complementary component of these analyses, as well as generating reports on these material categories which will be significant contributions to their study, at least in regional terms, in their own right. Further details of the specific recording methodologies for each category are presented below in the context of their individual assessments.

1.4 Business case

- 1.4.1 A key phase of fieldwork in the Phase 2 area was completed at the end of 2008, bringing the fieldwork programme to a logical, if temporary, conclusion. Further work has since taken place in (Phase 2) Tar Farm 6, the area of the quarry furthest

away from the focus of Roman settlement and is not treated here (but more recent completion of fieldwork in Phase 2 Area 5 has been taken account of in the present assessment). For this and other reasons connected with Smiths' and the Harcourt Estate's requirements for forward projections of archaeological expenditure it is desirable that analysis and reporting of the Phase 2 dataset should proceed forthwith. Meaningful assessment, realising the full potential of the data, clearly required the inclusion of the material from the Phase 1 work. This has been achieved and an integrated view of the settlement as a whole has been obtained. At this interim stage in the life of the overall Gill Mill project, analysis of the datasets from the two phases could proceed sequentially to take advantage of the availability of resources, the results being linked in a report at a slightly later stage. The two phases present important complementary evidence. It should be noted, however (see Risk Log below) that a report on the the Phase 2 works has the potential to be a valid piece of work in its own right, whereas the Phase 1 analysis would be less satisfactory as a stand-alone report.

- 1.4.2 Nevertheless, the Phase 1 dataset is an important body of material, as was recognised in the award of ASLF funding to allow the assessment of the Phase 1 material to be undertaken. It falls within the range of ALSF priorities defined by English Heritage in relation to quarries (Theme 1.4: Emergency funding for the recording, analysis and publication of nationally significant archaeological remains discovered during aggregates extraction). The provision of this funding therefore acknowledges the importance of the Phase 1 dataset, which is enhanced further by its association with that for Phase 2.
- 1.4.3 The Gill Mill complex currently has a low profile amongst both archaeological and wider communities owing to the lack of reporting. Presentation of a formal assessment of work to date, which will be accessible via the Oxfordshire HER, will be of benefit in this regard. As suggested by EH, this can form the basis of a short summary journal publication indicating the potential of the site. The role of EH and the developer in partnership can be emphasised. The assessment report will also be accessible via the ADS.
- 1.4.4 The proposed project fulfils the conditions required for definition as SHAPE Sub-Programme 11113.110: Realising the research dividend from past unpublished historic environment investigations.

1.5 Project scope

- 1.5.1 The project comprises the publication of archaeological work – evaluation, watching brief and excavation - carried out at Smith and Sons (Bletchington) Ltd gravel quarry at Gill Mill, in the parishes of Ducklington, South Leigh and Hardwick-with-Yelford, Oxfordshire between 1988 and 2008; it will not cover archaeological works carried out at Gill Mill after the end of 2008.
- 1.5.2 The project therefore builds on the results of the present assessment of the archive from the Phase 1 and 2 work and integrates the results of the proposed analysis with site specific data and wider analyses of prehistoric and Roman sites in the region (and beyond as appropriate).

1.6 Interfaces

- 1.6.1 Work is ongoing in several parts of the Gill Mill quarry, relating to both Phase 1 and Phase 2 areas. The results of some of this work can be incorporated into the proposed programme of analysis and reporting, although the additional costs

involved would need to be agreed before this is done. Some of the ongoing work may need to be reported separately if the results justify that approach.

- 1.6.2 Preliminary archaeological work is currently under way on part of an area adjoining the Phase 1 works to the north and east, which is likely to be the subject of a formal application to extend the quarry. This could eventually result in examination of a considerable additional area of the lower Windrush valley landscape. Any reporting of archaeological works in this area would form a totally separate project. The present sites provide a mass of data which provide background for and a basis for understanding of the archaeological resource in these new areas.
- 1.6.3 The quality and quantity of data, particularly for the Roman settlement at Gill Mill, and the importance of the latter, make this site of great value for understanding aspects of late prehistoric and Roman settlement across the region, and particularly in this part of the Upper Thames Valley. As a source of comparative data and by virtue of its place within the regional settlement hierarchy the site will make a substantial contribution to further studies of these periods in the region.

1.7 Communications

- 1.7.1 The project team will communicate by email and through face-to-face discussions. Progress reports will be made to Simon Smith and Martin Layer (Smiths) and William Gascoigne and Charles Campion (Stanton Harcourt Estate) by email on a monthly basis. Monitoring meetings will be held with Helen Keeley (English Heritage) on a quarterly basis. Brief quarterly progress reports will be made to Oxfordshire County Council.

1.8 Project review

- 1.8.1 Project progress will be assessed by the Project Manager, Paul Booth, the Project Officer, Andrew Simmonds, and the Post-Excavation Manager, Alex Smith, in face-to-face meetings on a weekly basis. Oxfordshire County Council will be informed of major developments in the post-excavation analysis programme.

1.9 Health and safety

- 1.9.1 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 OA 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 of 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

Specific risks – Gill Mill post-excavation

- 1.9.2 Lifting and carrying finds boxes. Loading and unloading boxes and moving boxes. Care will be taken to avoid muscular-skeletal injury through improper handling.

- 1.9.3 Handling of pottery. The site was not contaminated and therefore there are no problems from this source. Basic hygiene rules apply. No eating or drinking at the work area. Wash hands and face prior to eating or drinking. However, because the pottery can be produce fine dust particles, it will be necessary to take basic precautions – working in a well ventilated space, use of water spray to keep dust down - to avoid inhaling dust during handling. Masks will only be used if the dust cannot be controlled by other means.
- 1.9.4 Computer use. The work will involve a substantial amount of data input and word processing. The regulations laid down regarding the use of Display Screen Equipment will be adhered to. In particular regular breaks will taken while using computers.
- 1.9.5 Data inputting and Word processing. This work could quite extensive and therefore care will be taken to avoid prolonged periods of work without breaks to avoid any risks of repetitive strain injury.
- 1.9.6 A copy of the above will be provided to the members of the OA project team.

2 RESOURCES AND PROGRAMMING

2.1 Project team structure

2.1.1 The project team is set out in Table 2 below.

Name	Organisation	Responsibilities
Alex Smith	OA South	Publications manager; project monitor; editor
Paul Booth	OA South	Project manager; Iron Age and Roman pottery
Andrew Simmonds	OA South	Stratigraphic analysis and interpretation
Leigh Allen	OA South	Finds manager
Rebecca Nicholson	OA South	Environmental manager
Nicola Scott	OA South	Archive manager
Matt Bradley	OA South	Geomatics manager
Louise Loe	OA South	Head of burials
Edward Biddulph	OA South	Fired clay
Susan Brown	OA South	Archives assistant
Elizabeth Huckerby	OA North	Pollen
Kath Hunter	OA South	Charred and waterlogged plant remains

Sarah Lucas	OA South	Senior illustrator
Paul Miles	OA South	IT support
Ian Scott	OA South	Small finds
Ruth Shaffrey	OA South	Worked stone
Lena Strid	OA South	Faunal remains
Helen Webb	OA South	Osteologist
Elizabeth Stafford	OA South	Land and freshwater snails
<i>External specialists</i>		
Dana Challinor	Freelance	Charcoal
Damian Goodburn	Freelance	Waterlogged wood
Martin Henig	Freelance	Sculptural stone
Lynn Keys	Freelance	Metalworking residues
Hugo Lamdin-Whymark	Freelance	Lithics
Dan Miles	University of Oxford	Dendrochronology
Quita Mould	Freelance	Leather
Phillipa Walton	Freelance	Coins
Penelope Walton-Rogers	The Anglo-Saxon Laboratory	Basketry

2.2 Methods statement

Stratigraphy and phasing

- 2.2.1 Full stratigraphic analysis will be carried out on the records generated by the fieldwork. Provisional stratigraphic sequences have been constructed for the main excavation areas. These will be checked, expanded and refined by combining the evidence of context descriptions, plans and sections. Chronological data from ceramic, numismatic and dendrochronological dating sources will be used to produce a finalised phasing scheme. Each area will be analysed by phase in order to establish its overall morphology during each phase and to identify changes and continuities in morphology and function through time. These analyses will then form the basis of stratigraphic narratives for each area. These narratives will generally be presented at an intermediate level of detail, so for example features descriptions will not usually involve detailed descriptions of individual fills, unless these are particularly noteworthy. Plotting and spatial analysis of each category of find will be undertaken in order to define activity areas, or locations in which material was disposed of. This may be particularly significant, as little evidence for buildings has survived across most of the settlement. Special attention will be paid to evidence for structures and for burials.

A further key component of analysis will be the examination of the evidence from pits, with consideration of their morphology and distribution and the correlation and combination of material categories with these features. A full archaeological description will be produced, illustrated with appropriate plans, section drawings and plates.

Finds

Coins

- 2.2.2 A significant proportion of the coins require cleaning by a conservator to facilitate improved identification. A full record of the coins will be prepared following the standards set out by Brickstock (2004). Analysis will consider spatial and temporal aspects of the assemblage as well as comparison with other assemblages from the region in order to place the Gill Mill collection in its appropriate context with regard to settlement type and to clarify interpretation of the apparently unusual aspects of the assemblage in terms of chronology and variation in issue period emphasis.

Metalwork

- 2.2.3 The overall assemblage of Roman metalwork will be published and selected items illustrated. The data will be summarised in the form set out below, with expanded description of selected objects and consideration of intra-site aspects such as feature associations and variations in the distribution of the material. More extended discussion will put the assemblages into their regional and (if appropriate) national contexts. Line illustration will be supplemented with photographs as appropriate.

Worked bone, shale and jet

- 2.2.4 The small assemblage from DUGM 1990 Area 4, comprising as it does a number of similar bone points, a counter and possible rough out for a hairpin, will be published and selected objects illustrated. The small assemblage from SLGM Area 4 provides a good indication of the material culture associated with the Roman settlement and will be published and illustrated in conjunction with the other small finds. Analysis will include consideration of the distribution of these material categories across the site.

Glass

- 2.2.5 The glass assemblage from DUGM 1988 Area 2 will be published, but only a limited number of sherds/vessels require detailed publication and illustration. The spatial distribution of the late Roman sherds will be plotted. The small bead (SF 514) from DUGM 1990 Area 4 context 3005/B/2 will be published and illustrated. The glass assemblage from SLGM Area 4 is relatively substantial. A proportion of the assemblage is clearly of late Roman date, with a substantial number of sherds at present dateable only to the Roman period. Further analysis of the assemblage will be carried out in order to refine the dating of some of these sherds. Its spatial distribution will be plotted in relation to the known structural features in this area. A number of sherds/vessels will be illustrated and catalogued.

Carved stone

- 2.2.6 The two joining fragments of an (incomplete) altar to a Genius and the small relief panel of a horse and rider and the built into a wall of one of the outbuildings of Gill Mill House have been published by Henig in the CSIR volume for the Cotswolds (Henig 1993, nos 36 (Genius) and 124 (horse and rider)) and do not require detailed treatment here. The Mater-type goddess and the miniature altar will be fully described and illustrated. This will include photographs.

Other worked stone

- 2.2.7 All the worked stone artefacts will be fully recorded. The possible building and roofing stone will be recorded, counted, weighed and categorised, and unworked items will be discarded. Any roofing material will be considered alongside the ceramic building material. Further research will be undertaken for the figurines and the stone lamp in order to determine their significance on this site. The oolitic limestone will need careful examination in order to determine its most likely source. A report will be written which describes the worked stone roofing and artefacts (lamp, hammerstones, querns, axe and whetstones) and which places them in a regional context. Ten items have been selected for illustration.
- 2.2.8 Worked flint The existing assessment text will be used as the basis for the publication report. This will incorporate enhanced artefact descriptions for key pieces and will take account of refined data relating to the context of the identified material. Selected pieces (c 10) will be illustrated with photographs. The stone axe will be thin-sectioned for the purpose of identification and sourcing.

Pottery and ceramic small finds

- 2.2.9 A very large proportion of the total assemblage will be recorded in detail. Pottery from the less useful types of context (uncertain, unstratified, topsoil and natural feature) will not be recorded. For the assemblage from DUGM Area 6-8 the pottery from graves and pits is more important than that from ditches and the latter will only be scanned again if this is necessary as a result of analysis of the pottery from graves in this area. By these means the total of material to be examined will be reduced by some 3275 sherds. The DUGM assemblage to be recorded in detail is therefore c 6435 sherds
- 2.2.10 For SLGM the relatively small assemblages from Areas 2, 3, Head of conveyor and 5 will be recorded in full (excluding the less useful context type groups mentioned above) both to provide data for purposes of comparison with the large Area 4 assemblage as a means of enabling functional comparison and also because of the variations in chronological range between these areas - including the fact that most middle-late Iron Age and early Roman (1st century AD) activity is concentrated here. Context types of little analytical value contain some 1350 sherds which will not be examined again. Some of the material from layers may also be disregarded, but some of these contexts are significant. The total material to be examined from SLGM is currently estimated at c 44000 sherds.
- 2.2.11 The pottery will be recorded using the standard OA system for later prehistoric and Roman pottery (Booth 2008). Material will be recorded in terms of fabric and form by context groups. Quantification will be by sherd count and weight and vessels will be quantified by EVEs. Fabric identifications will use the OA reference collection, cross referenced to the National Roman Pottery Fabric Reference Collection (Tomber and Dore 1998). Recording will also take account of evidence for characteristics such as use and reuse. A sample of the pottery will be

illustrated; the selection criteria for illustration will privilege good (large) feature groups, but will also include other vessels of intrinsic interest.

Ceramic building material

- 2.2.12 The assemblage will be fully recorded, including assigning all pieces to type categories, weighing and measuring of any surviving dimensions. A fabric series will be created and all specimens assigned to fabric types. If time needs to be saved, the fabric analysis could concentrate on the fragments that can be assigned to type (not the indeterminate fragments). All this information will be entered into a ceramic building material database. A few samples of the different fabric types will be extracted and retained for future reference; these will be identified and categorised using a x10 magnification hand lens. Fragments deemed to be of little potential in terms of fabric or type analysis will be marked as being available for discard (any discard policy will need to be discussed with the receiving museum). One or two unusual fragments (such as the decorated imbrex in SLGM context 6657) will require illustration.

Fired clay

- 2.2.13 The structural pieces and disc fragments (from a total of four contexts in DUGM and six contexts in SLGM) will be recorded in terms of fabric and form and discussed in functional terms in more detail. The overall distribution of the material will be analysed using the data already gathered. Three or four pieces will require illustration.

Worked wood

- 2.2.14 Further specialist work on this assemblage will include the completion of the detailed timber records and sampling of the 43 items worthy of that effort. The woodwork specialist will correlate information on the timber with detailed site phase plans, and samples for dating can then be selected and sent off for analysis. Once dating results are obtained and phasing finalised the analysis of the worked wood can be completed, with c 10 draft figures.

Dendrochronological dating

- 2.2.15 Up to 19 samples will be recorded using standard techniques employed by the Oxford Dendrochronology Laboratory.

Leather

- 2.2.16 Details of recording and analysis methodology are awaited. Material selected for detailed analysis and reporting will be freeze dried prior to the work being undertaken.

Basket

- 2.2.17 The basket will be examined to determine the nature of the fibres (using microscopy if necessary) and the method of construction.

Metalworking debris

- 2.2.18 It is proposed that the specialist assessment should be completed as soon as possible. In view of the small quantities of material this will form the basis of the publication report, with a small amount of additional work to examine phase and distribution data once these are refined.

Environmental evidence*Human remains*

- 2.2.19 All the inhumation burials not already analysed (ie 10 from Phase 1 and 11 from Phase 2 areas) should be fully recorded, though bearing in mind the general unsuitability of the material for metric and non-metric analysis. Age and sex estimations will be refined while dentition will be fully recorded along with any skeletal pathology present. The evidence for sharp-force trauma to the skull exhibited by skeleton 6881 is particularly noteworthy given the context of the burial, confined within a barrow. SEM analysis of the sharp-force trauma to the skull of skeleton 6881 will be carried out. A sample of bone will be submitted for radiocarbon dating. All surviving bones will be systematically examined in order to identify any surviving pathological indicators. All results will be incorporated into the catalogue and presented in the final report.
- 2.2.20 A total of 14 deposits of cremated bone are worthy of further detailed analysis (nine from Phase 1 and five from Phase 2) and will be examined according to standard recommended practice (Brickley and McKinley 2004). A full report will be prepared. Unsorted residues are associated with cremation deposits 216, 218, 222 and 224. These have already been scanned and it is unlikely that further information will be gained by sorting and examining the unsorted residues from these deposits.
- 2.2.21 The cranial bone 4440, SF 19 is presently dated by its association with pottery recovered from the ditch in which it was found. Interpretations cannot be fully explored without a more secure date and, to this end, the bone will be sent for radiocarbon dating. Other work will involve SEM analysis of the striations to explore the interpretation that these were created with a bladed tool.

Animal remains

- 2.2.22 The very large and well preserved Gill Mill Roman assemblage is particularly interesting and is recommended for further analysis. The ratio recorded in the assessment for cattle compared to sheep is larger than at any other site in the region - assuming that the species frequency in the assessed part of the assemblage is valid for the assemblage as a whole - and indicates a focus on cattle husbandry, whether for dairy production, meat production or for breeding.
- 2.2.23 While the middle Iron Age and early Roman assemblages are small, they provide important comparative data for the middle and late Roman material and thus will also be fully recorded and reported. Further refinement of phasing of features may increase the numbers of animal bones from these periods.
- 2.2.24 Analysis will concentrate on species frequency, livestock slaughter age pattern, butchery and animal size for the assemblage from the middle-late Roman nucleated settlement. Spatial analysis will be undertaken in order to investigate waste management between feature types as well as between the main settlement area and the outlying parts, represented by excavation areas SLGM 3, SLGM 5 and SLGM Head of Conveyor. While the enclosures and pits in these areas only contain 773 and 87 bones from features which have been phased at this stage, further features are likely to be dated and this should increase the numbers of animal bones from these areas. Several pits in SLGM Area 4 contained large quantities of pottery, animal bone and small finds. An analysis of the rubbish within these may also reveal spatial patterning in waste disposal.

- 2.2.25 Only securely phased bone will be recorded in full. It will not be necessary to fully record the sieved assemblage, due to the relatively small number of speciable bones. However, sieved samples from human burials will be fully recorded. Furthermore, all hand-collected contexts will need to be scanned in order to retrieve any worked bones, fish bones or human bones.
- 2.2.26 Time constraints may mean that not all of the bones can be recorded in full. If this problem arises, it is recommended that bones from a representative range of features and areas of the site are recorded, aiming to record approximately 70% of the bone in total. However, in order to increase the validity of the analysis, the remaining contexts should be scanned and ageable, sexable and measurable bones should be extracted, as well as bones with pathologies and noteworthy butchery marks.

Charred plant remains

- 2.2.27 On the basis of the poor assessment results from Phase 1 (DUGM) no further work involving the sorting and quantification of the flots is required although the small amounts of identifiable material in the 32 samples will be recorded, either on the basis of the assessment results and/or by rapid scanning of selected contexts. The results, however, will not necessarily have to be tabulated.
- 2.2.28 Full analysis (including sorting and quantification) will be carried out on the 13 charred plant assemblages from Phase 2 (SLGM) with moderate to rich amounts of identifiable material. It may be necessary to subsample the six very rich flots using a riffle-box with a percentage being quantified and the remaining fraction scanned for additional species. The presence of the occasional or small amounts of identifiable remains from the other 70 productive flots will also be recorded either using the assessment results and/or by rapid scanning of selected contexts. These results will not necessarily have to be tabulated although they may be used in the general discussion of the botanical evidence from the site.
- 2.2.29 Thirteen rich assemblages have been recommended for analysis as potential 'waterlogged' samples and are listed with the assessment of waterlogged plant remains.

Charcoal

- 2.2.30 For both areas of the site, DUGM and SLGM, a dual approach to the analysis will be followed, involving: 1) Broad characterisation of the assemblages by scanning and examination of c20 fragments at low magnification, with rare confirmation of identifications at higher magnification and 2) Full analysis of selected contexts (50-100 fragments depending upon diversity) which are deemed of particular significance or high taxonomic diversity.
- 2.2.31 This will provide a presence dataset from which to examine broad fuel use and temporal trends, and a detailed dataset for important features such as cremations etc.
- 2.2.32 John Giorgi has recommended the examination of 21 Phase 1 samples containing large amounts of identifiable fragments, although there may be a few additional contexts which merit at least partial examination.
- 2.2.33 Fragments from all 63 moderate to rich charcoal assemblages from Phase 2 have been identified. The exact selection of samples will depend on final phasing data and contextual analysis, and it may be necessary to examine some of the samples with lesser quantities of charcoal, if the contexts are particularly significant.

Waterlogged plant remains

- 2.2.34 Some 24 samples (11 from DUGM and 13 from SLGM) will be fully analysed. Retained soil (10L) from sample 4058 will be processed and the flot included in the analysis. The rich 'waterlogged' plant remains from DUGM95 layer 5 are included in this total as it has been established that these remains are contemporary with the sampled feature and not intrusive.
- 2.2.35 The remains from 24 samples from Phase 2 (SLGM), including 12 that were taken for charred plant remains that were assessed as containing rich 'waterlogged' botanical assemblages, will be scanned, but only after it has been established that the material is contemporary with the sampled features and not intrusive. These results will be combined with the data for the fully recorded samples to supplement analysis of the spatial and temporal distribution of different types of waterlogged remains.

Pollen

- 2.2.36 Analysis will be undertaken on the lower fills of late Roman stone-lined waterlogged well/waterhole 4162, late Roman waterlogged pit 10141 and sample 56 from DUGM90.

Land and freshwater snails

- 2.2.37 In order to provide a definitive species list and to support the environmental interpretations from other categories of material the seven most abundant samples will be analysed further. Analysis will involve identification of whole shells and apical fragments from both flots and residues. The shells will be examined under a binocular microscope at magnifications of up to x40. Shells will be identified to species level with the aid of a modern reference collections held at Oxford Archaeology. The results of the analysis will be presented in a written report supported by tabulated data.

Insects

- 2.2.38 Sediment samples with volumes of 3-10L litres (depending on sample richness) will be processed by the "washover" technique (bucket flotation) to 0.25mm flot and residue by Oxford Archaeology South staff and the >4mm residue fraction removed. The 0.25mm residues will be processed by paraffin flotation to extract insect remains following the methods of Kenward *et al.* (1980).
- 2.2.39 For full analysis, beetles (Coleoptera) and bugs (Hemiptera) will be extracted from the paraffin flots onto moist filter paper for identification using a low-power microscope (x10 – x45). Identifications will be by comparison with modern insect material and reference to standard published works. Numbers of individuals and taxa of beetles and bugs will be recorded, and taxa divided into broad ecological groups for interpretation following Kenward *et al.* (1986) and Kenward (1997). The state of preservation of remains was recorded using the system of Kenward and Large (1998) where fragmentation (F) and erosion (E) are scored on a scale from 0.5 (superb) to 5.5 (extremely decayed or fragmented). The abundance of other invertebrates in the flots was recorded on a three point scale as present, common or abundant.
- 2.2.40 For scan recording, beetles and bugs will not be extracted, but rather entire flots will be scanned using a low-power microscope (x10 – x45), and the abundance of

identified taxa will be recorded on a three point scale as present, common or abundant.

2.3 Stages, products and tasks

- 2.3.1 The component tasks identified for completion of the proposed publication report are set out in the table below. The interrelationships of these tasks and their overall timescale, are shown in the Gantt chart appended to the end of this document. NOT IN THIS VERSION OF THE DOCUMENT

2.4 Publication

- 2.4.1 The results of archaeological work at Gill Mill to date clearly merit publication in detail. This will take the form of a monograph in Oxford Archaeology's 'Thames Valley Landscapes' series. It is proposed that this follow a format recently adopted for several substantial OA excavations in the region, dividing the presentation of the material into two main parts. The first part will comprise introductory text, site narrative and discussion and conclusions, incorporating summaries of the various specialist contributions as appropriate. The full specialist finds and environmental reports will be presented in digital download format, which will also be available as digitally-printed print on demand hard copy, constituting the second part of the report. This approach results in a report which meets the requirements of the project brief while reducing production costs.
- 2.4.2 The report will take account of all the fieldwork carried out up to the end of 2009. Since the duration of the anticipated analysis and reporting programme is about two years it may be possible to incorporate results of subsequent work, particularly in the Tar Farm areas of SLGM, in order to produce as rounded a picture as possible of the Roman settlement and other aspects of this section of the Windrush valley. This would require some adjustment to the project timings and costs outlined above, but will be the most cost-effective way of taking account of new evidence.

Publication synopsis

Later prehistoric landscape and a Roman nucleated settlement in the lower Windrush valley at Gill Mill, near Witney, Oxfordshire. Part 1: site narrative and overview
By Paul Booth and Andrew Simmonds, with contributions by [numerous specialists]

Chapter 1: Introduction

Introduction
 Physical and archaeological background
 Project background
 Structure of report and archive

Chapter 2: The prehistoric background

Early prehistory
 Worked flint *by Hugo Lamdin-Whymark*
 Middle Iron Age settlements
 Iron Age pottery

Chapter 3: The origins of the Roman settlement

Late Iron Age/early Roman activity
 The establishment of the nucleated settlement
 The settlement in the later second-early third century

Chapter 4: The later Roman settlement

From the middle of the third to the early fourth century
 The final Roman phases

Chapter 5: Roman finds evidence summaries

Coins *by Philippa Walton*
 Metalwork *by Ian Scott*
 Worked bone, shale and jet *by Ian Scott*
 Glass *by Ian Scott*
 Carved stone *by Martin Henig*
 Other worked stone *by Ruth Shaffrey*
 Pottery and ceramic small finds *by Paul Booth*
 Ceramic building material *by Ruth Shaffrey*
 Fired clay *by Edward Biddulph*
 Worked wood *by Damian Goodburn*
 Leather *by Quita Mould*
 Basket *by Penelope Walton-Rogers*
 Metalworking debris *by Lynn Keys*

Chapter 6: Roman human remains and environmental evidence summaries

Human remains *by Helen Webb*
 Animal remains *by Lena Strid*
 Charred plant remains *by Kath Hunter*
 Charcoal *by Dana Challinor*
 Waterlogged plant remains *by Kath Hunter*
 Pollen *by Elizabeth Huckerby*
 Land and freshwater snails *by Elizabeth Stafford*

Chapter 7: Discussion

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 Ceramic building material *by Ruth Shaffrey*
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Charcoal *by Dana Challinor*
Waterlogged plant remains *by Kath Hunter*
Pollen *by Elizabeth Huckerby*
Land and freshwater snails *by Elizabeth Stafford*

Bibliography

2.5 Ownership and archive

- 2.5.1 Oxford Archaeological Unit retains ownership of the documentary archive generated by the project. The artefactual archive is owned by the Stanton Harcourt Estate. Oxford Archaeology will maintain the archive to the standards recommended by the Institute for Archaeologists (IFA nd) and Archaeological Archives Forum (Brown 2007). The archive will be stored in a suitable secure location until the completion of the project, when it will be deposited with Oxfordshire County Museum under accession numbers OXCMS:1989.75 and OXCMS:2002.163. Oxford Archaeological Unit will retain copyright in all reports and documentation/images produced in this project.



APPENDIX A. RISK LOG

1.1

This table lists risks identified during the planning of a project at the initiation stage or execution of a project.

Table A.1: Risks

No.	Description	Probability	Impact	Countermeasures	Estimated time / cost	Owner
1	Unavailability of specialist staff at required point in programme	20.00%	Medium	Source alternative internal or external expertise. Programme has flexibility built in	Should be none within overall project timescale. Some knock-on effects to submission of project possible	SPME SPMF
2	Hardware and software failure	5.00%	High	OA IT team to ensure repair or replacement within 24 hours	None. Will be initially be covered by warranty or replaced by OA under existing IT protocols	SPM
3	Specialist reports late	30.00%	Medium	Project "pauses" to wait for reports/carry on with other aspects of project until reports received. Programme has flexibility built in	Slight delay in submission of final project report possible	SPM
4	Delay in work on Phase 2 analysis	20.00%	Slight	Project "pauses" to wait for reports/carry on with other aspects of project until reports received. Programme has flexibility built in. Delay is only critical in final phases of project	Slight delay in submission of final project report possible	SPM
5	Delay in agreeing project funding Phase 2		Severe	Involve English Heritage and Oxfordshire County Council in applying pressure to ensure fulfilment of planning condition	Entire project timetable delayed	Project team
6	Delay/failure to obtain funding for Phase 1 work		High	Use PX assessment report data as basis of summary to complement report on the Phase 2 work	Limited resources required to recast PXA text in suitable format	SPM

APPENDIX B. QUANTIFICATION OF SITE ARCHIVE

B.1

Table B.1: Gill Mill: Approximate quantification (numbers of records or objects) of principal categories of archive material

Category	DUGM (all areas, 1988-2009)	SLGM (all areas, 2001-2009, except Tar Farm 6)	Comment
Site records			
Context records	4335	8340	
Primary plans A1/A4 sheets	57/245 (includes some sections)	82*/740	*principal plans mainly in digital form after 2004
Primary sections A1 & A4 sheets	68 sheets	930 + 65 sheets	
Films BW/Colour	30/30	150/155	
Digital photographs		1625	
Artefacts			
Coins	263	704	
Cu alloy objects	40	99	
Fe objects	482	839	
Pb objects	53	57	
Worked bone, shale and jet	12	35	
Glass	47	133	
Worked stone (stone total)	60 (186)	50 (845)	
Flint	45	33	
Ceramic building material	94	724	
Pottery	8650	47050	
Fired clay	325	845	
Metalworking debris	117 g	12087 g	
Worked wood	70	80	
Leather	9	65	
Other		basket	
Ecofacts			
Human bone: cremation deposits	16 (incl 2 very small)	29 (incl 16 very small)	
Human bone: inhumations	20	13	
Animal bone	8000	33000	Estimated figures based on c 10% sample
Charred plant remains samples	39	160	
Waterlogged plant remains samples	47	53	
Pollen	6 spot samples	2 columns	
Snail samples		34	

APPENDIX C. ASSESSMENT OF FINDS

C.1 Coins

Paul Booth

Introduction

The various phases of fieldwork at Gill Mill have produced some 967 Roman coins, 263 from DUGM and 704 from SLGM. These were scanned rapidly for the purposes of the present assessment. Full identifications were made where this was readily possible, otherwise the emphasis of the assessment was on broad dating of individual coins to assist in the stratigraphic analysis of the site and to provide a general characterisation of the assemblage which could contribute to an assessment of the character of the site in the Roman period. An additional aim was to identify those coins which will require cleaning before further work on them is possible.

The condition of the coins was very variable, ranging from occasionally good and uncorroded to completely encrusted or eroded. Ferruginous gravel concretion was present on many of the coins. In many cases sufficient preliminary cleaning was carried out by the specialist to allow identification at the general level mentioned above (essentially achieving a distinction between late 3rd century and 4th century coins), but this usually only involved partial removal of concretions and corrosion. Many coins will, therefore, require cleaning by a conservator in order to allow identifications to be refined or, in the case of those coins only assigned to a broad 3rd-4th century range, to be established meaningfully. For these reasons it is emphasised that the picture presented in the present assessment, while reflecting the best understanding of the material on current evidence, may be subject to change in detail as the identification of individual pieces is refined.

Many of the coins, particularly in Area 4 of SLGM, were recovered by metal detector, used to counter losses incurred through 'nighthawking', evidence of which was clearly visible on the site. The metal-detected coins were plotted using a total station, but their locations have yet to be correlated in detail with the subsequent excavated features plan.

The evidence of the coins is summarised below, both in terms of the two separate groups (DUGM and SLGM) and also together. The implications of the present data for understanding the site are discussed, followed by proposals for further work that will allow the potential of this unusually large and important body of evidence to be exploited more extensively.

The assemblage

Detailed coin identifications are presented in Tables C.1.3 and C.1.4, for DUGM and SLGM respectively. The assemblages are summarised in chronological terms in Table C.1.1, using the revised period numbering scheme of Reece (eg 1991) and then grouped into four wider coin loss phases (A to D, Reece 1973, 230-231), a useful basis for broad-based analysis. The numbers of coins that currently fall outside this scheme are given at the bottom of the table. No attempt has been made to divide coins not specifically assignable (because of their poor condition) to period 13 or 14 between the two, but all certain or probable irregular radiates (antoniniani) have been assigned to period 14, after AD 275 (this period of course also contains some regular issues). It is likely that a high proportion of the otherwise unidentifiable radiates were further irregular pieces.

Table C.1.1: Quantification of coins by issue period and phase

Date	Reece Period	DUGM			SLGM		
		Total coins	Phase total	% of coins assigned to phase	Total coins	Phase total	% of coins assigned to phase
-41	1						
41-68	2/3						
69-96	4				1		
96-117	5				1		
117-138	6				1		
138-161	7				1		
161-180	8				3		
180-192	9						
193-222	10				1		
222-238	11				1		
238-260	12				1		
Other Phase A		3	3	1.2	20	30	5.1
260-275	13				25		
275-296	14	11			123		
Other Phase B		14	25	10.1	161	309	52.9
296-317	15	4			12		
317-330	16	7			32		
Other Phase C		9	20	8.1	24	68	11.6
330-348	17	108			140		
348-364	18	43			28		
364-378	19	8			6		
378-388	20	-			-		
388-402	21	-			-		
Other Phase D		41	200	80.6	3	177	30.4
3-4C		14			117		
uncertain		1			3		
Total		263	248		704	584	

The majority of coins of Phase A are not identified to a specific period. This is because these coins are mostly AES of the 1st-2nd centuries which tended to remain in circulation over an extended period and were typically very worn by the time they were deposited. It is possible that a few antoniniani of period 12 are concealed amongst the radiates currently attributed to Phase B but not assigned to a specific period. For present purposes, however, antoniniani have been assigned to Phase B as the 'default option', unless there were compelling reasons to date them earlier. Amongst the Phase A coins only one was certainly and one probably of 1st century date, although it is possible that some of the very worn coins were also of this date. Overall, however,

the material from this phase is consistent with all the other evidence which suggests that the main Roman settlement was not established until the early 2nd century AD. Despite their low overall numbers, coins of Phase A are significantly better represented in SLGM than DUGM.

Phase B sees the most marked contrast between the two Gill Mill assemblages, with only 10.1% of coins from DUGM assigned to this phase while at SLGM they accounted for over half of the total (numismatically) phased assemblage. The reason for this difference is unclear; possible aspects of its significance are discussed below. As indicated above, distinction between coins of periods 13 and 14 was not easy owing to the generally poor condition of the coins, although it is likely that a large proportion of the coins assigned to period 14 were irregular copies. These 'barbarous radiates' included a number of small coins of a module (typically about 10-12 mm) also seen in imitation issues of the period c AD 350-364. It is possible that there has been some mis-assignment based on size (where no identifiable legends or figure types could be discerned), but generally in SLGM these small coins tended to be of period 14, while at DUGM they were more commonly of period 18. Overall very few Phase B coins were confidently identified as regular issues of the emperors of this period. Single coins of Gallienus and Postumus, 2 of Claudius II and perhaps 8 of Victorinus, 3 of Tetricus I, 7 of Carausius and 4 of Allectus from SLGM, and one each of Tetricus II and Carausius from DUGM, might have been regular issues, but not even all of these are certain.

The quantities of early 4th century coins of Reece's Phase C are small but are nevertheless striking by comparison with other assemblages in the region. Over 10% of all the coins from Gill Mill were assigned to this phase. These included significant numbers of large coins of types such as GENIO POP ROM which are always rare as site finds on rural settlements in the region. Coins of this phase were more common at SLGM than at DUGM, but the difference was much less marked than for other phases and their representation at DUGM was still higher than in comparative sites. Identified reverse types of the less commonly present period 15 coins include GENIO POPULI ROMANI, GENIO POP ROM, SOLI INVICTO COMITI and ADVENTUS AUG, this last from DUGM, while amongst the less common types in period 16 (from SLGM) an issue of IOVI CONSERVATORI, for Licinius, was struck in an eastern mint (perhaps Heraclea or Nicomedia) in the period 321-324.

The DUGM assemblage was dominated by coins of Phase D, from AD 330 onwards, which amounted to 80.6% of the total phased coins from this part of the sites, while the corresponding figure for SLGM was only 30.4%. In both areas, but particularly the latter, the great majority of identifiable Phase D coins were of period 17 (AD 330-348). These included a significant number of imitations of the main issues of this period (Urbs Roma, Constantinopolis, Gloria Exercitus (1 and 2 standards), and Victoriae dd Augg q nn) which for present purposes have been grouped as contemporary with the period of issue of the official prototype. Period 17 is typically the one most commonly represented by rural site finds and that is the case here, although at SLGM this peak period of loss is only slightly above that for period 14 while at DUGM this was much the best-represented single coin loss period. At SLGM coin loss declined dramatically in the subsequent period (18). A few of these coins were regular issues but the majority (at least 20) were certain or probable imitation Fel Temp Reparatio pieces. At least 33 of the rather larger number of period 18 coins from DUGM were also of this type. The coin lists of both areas ended in the following period (19), but with only small numbers of coins confidently assigned to it (mostly of the Securitas Reipublicae type). The consistency of this pattern is striking, and its validity is emphasised by the total absence of later coins. Period 20 is often very poorly (if at all) represented in rural assemblages, but the complete absence of coins of period 21, particularly given the overall size of the assemblage, is undoubtedly significant, despite the poor condition of many coins.

As far as can be determined at present the mints represented amongst the 4th century coinage are those that would be expected. The early 4th century (periods 15 and 16) coins include issues of London, Trier, Lyons and an uncertain eastern mint (see above), while period 17 is dominated by issues of Trier, a typical pattern. Arles becomes more important later, but is nevertheless poorly represented because of the overall scarcity of coins of period 19, when Arles was one of the main sources of coins found in Britain. Occasional pieces are present from Rome, and there is a single coin of Constantinople ('bridge' type, of AD 341-348).

Spatial patterning

At a broad level significant differences are evident between the DUGM and SLGM assemblages, as discussed above. Some 238 of the total of 263 Roman coins from all the DUGM sites were recovered in the 1988 evaluation. All of these came from the area of Roman settlement focussed on the NNE-SSW road located in Area 2, whether from the evaluation trenches or from three surface scatters identified at the same time. On the basis of markings on the bags the date ranges assigned to coins from these scatters were as follows:

Scatter A (7 coins); 330-335, 341-348, 364-378, ?4C(3)

Scatter B (12 coins); ?late 3C, 330-, 330-335(2), 335-341, 341-348(2), 348-350(3?), 4C

Scatter C (8 coins); 330-, 330-335(4?), 330-341, 350-364(2)

These breakdowns do not suggest that the 'scatters' represented hoards of coins, but rather simply reflected concentrations of material representative of the overall coin loss profile from this area and brought to the surface of the field by ploughing.

The eleven coins from DUGM90 came from the excavation of Area 4 immediately west of Area 2. These comprised 2 1st-2nd century (Phase A) pieces, 6 of Phase B, 1 of Phase C and 2 of Phase D. The remaining 14 coins from DUGM are from work in Area 9 in 1997 and 1999. It is notable that the broad chronological breakdown of this material (8 coins of Phase B, 3 of Phase C and 3 of Phase D), rather like that from the 1990 Area 4 excavation, is more closely comparable to the pattern of the SLGM areas than it is to that of Area 2.

The large coin assemblage from SLGM came exclusively from Area 4, and was concentrated in the area of settlement focussed upon the NW-SE aligned road running down the Windrush valley, an area of approximately 4 ha overall.

Table C.1.2: Quantities of coins by Reece phase

Phase	DUGM		SLGM		TOTAL	
	No. coins	% of phased coins	No. coins	% of phased coins	No. coins	% of phased coins
A (-260)	3	1.2	30	5.1	33	4.0
B (260-296)	25	10.1	309	52.9	334	40.1
C (296-330)	20	8.3	68	11.6	87	10.5
D (330-402)	200	80.6	177	30.4	378	45.4
Total phased	246		584		832	
uncertain 3-4C	14		117		131	
unknown	1		3		4	

Phase	DUGM		SLGM		TOTAL	
	No. coins	% of phased coins	No. coins	% of phased coins	No. coins	% of phased coins
TOTAL	263		704		967	

Main trends and potential

The coin assemblage is extremely large by the standards of other rural and/or minor nucleated settlements in the upper Thames Valley. The only larger groups are from an extensive settlement at Ashton Keynes (with some 1142 coins) and from the major temple complex at Marcham/Frilford. This characteristic gives the assemblage considerable significance in its own right, but more importantly it means that interpretation of the character of the site based on comparative studies can be securely based on a statistically valid sample. As has been noted above, there is interesting evidence for significant variation in the gross coin loss pattern between the DUGM and SLGM collections. This can be examined in more detail, and further aspects of coin distribution across the site can be considered once refined identifications are available for the whole assemblage. Chronological variation in the use of particular parts of the site can be examined, and the possible special significance of coins of particular periods (eg period 15) can also be considered on this basis.

The coins have already provided extremely useful evidence in relation to the overall period of occupation of the site. This is less the case for the 2nd century, although the coins convincingly support the pottery evidence which suggests an early 2nd start date for the main body of occupation, but is particularly important for the later Roman period, when close dating of pottery groups within the 4th century can be very difficult indeed. Here the coinage suggests a very significant reduction in the level of occupation by period 19 (AD 364-378), to the extent that we can suggest that there was little if any meaningful activity on the site after about AD 370. This is a very important conclusion which appears to contrast with evidence for other rural settlement in the area, where sites occupied in the early 4th century tend to survive throughout the late Roman period.

Perhaps the most significant aspect of the coin assemblage is the unusual nature of its overall profile (discussed above), in terms of the markedly high representation of coins of Phases B and C when seen against the regional rural settlement pattern. This suggests that there was an unusual aspect (or aspects) to the character of activity at Gill Mill, at least as reflected by the pattern of coin loss. This will be a subject for examination in two ways, first through detailed comparison with other numismatic data sets for the region (and beyond if necessary) and secondly through more detailed contextual analysis of the coins, considering both the features/deposits from which they derive and also the nature and quantities of other categories of finds with which they were associated. The possibility that the later 3rd century coins from SLGM include material from one or more small hoards, although unlikely, will need to be considered in the light of detailed contextual information.

Further work

A significant proportion of the coins require cleaning by a conservator to facilitate improved identification. A full record of the coins will be prepared following the standards set out by Brickstock (2004). Analysis will consider spatial and temporal aspects of the assemblage discussed above as well as comparison with other assemblages from the region in order to place the Gill Mill collection in its appropriate context with regard to settlement type and to

clarify interpretation of the apparently unusual aspects of the assemblage (in terms of chronology and variation in issue period emphasis) identified above.



Table C.1.3: DUGM all coins

Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
DUGM88	3	125		330-335	AE3 16mm	victory on prow	-	Constantinopolis			N
DUGM88	5	190	8	4C?	AE3 16mm	?		?		large part missing, eroded	?
DUGM88	5	191		330-	AE4 12mm	?		?			Y
DUGM88	5	192	8	350-364?	AE4 8mm	?		?		ID on basis of size	Y
DUGM88	5	193	81/1	260-296	antoninianus 17mm			radiate head r			Y
DUGM88	5	194	81/1	3-4C						very badly damaged	Y
DUGM88	5	196	81/1	335-341	AE3 14mm	GLORIA EXERCITUS 1 standard					Y
DUGM88	5	197	81/1	350-364?	AE4 10mm					irregular ftr??	Y
DUGM88	5	199	82/1	350-364?	AE4 9mm	?		?		irregular ??ftr	Y
DUGM88	5	200	83/1	330-335	AE3 15mm	GLOR[IA EXERCITUS 2 standards	TR.P ?				N
DUGM88	5	111a		e 4C?	AE2 19-21mm	figure		head r?			Y
DUGM88	5	111b		337-341	AE3 15mm	PAX PUBLICA		head r			N
DUGM88	5	111c		341-348	AE3 15mm	Victoriae dd Augg q nn					Y
DUGM88	5	119a		330-	AE3 15mm						Y
DUGM88	5	119b		350-364?	AE4 9mm	?		head r		irregular	N
DUGM88	5	119c		350-364?	AE4 11mm	?		?		irregular	?
DUGM88	5	119d		330-??	fragments					tiny fragments - poss irregular AE4	N



Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
DUGM88	5	205a	81/1	4C	AE3 14mm					fragment	?
DUGM88	5	205b	81/1	330-335	AE4 12mm	victory on prow		Constantinopolis		irregular	N
DUGM88	5	205c	81/1	341-348?	AE3 15mm	victoriae dd augg q nn???		head r		irregular??	N
DUGM88	7	116		330-337	AE3 16mm	victory on prow	?	CONSTANTINOPOLIS			N
DUGM88	7	131		341-348??	AE4 10mm	Victoriae dd Augg q nn??		head r?		irregular, very uncertain	?
DUGM88	7	223	47/1	335-341	AE3 16mm	Gloria exercitus 1standard		]CONSTANTI[		damaged	Y
DUGM88	7	226	49/1	330-335	AE3 13mm	GLORIA EXERCITUS 2 standards	missing	head r		irregular?	?
DUGM88	7	228	49/1	335-341	AE3 14mm	Gloria exercitus 1 standard	? .TRP Trier	FL IUL CONSTANS AUG ?			N
DUGM88	7	229	49/1	330-335	AE3 14mm+	wolf and twins		helmeted head I		good when lost, now badly damaged	N
DUGM88	7	231	49/1	350-364	AE3 17mm	FEL TEMP REPARATIO phoenix on pyre	missing	DNC[ONSTANT]IUS AUG		irregular?	N
DUGM88	7	232	50/1	335-341	AE3 16mm	Gloria exercitus 1 standard		DN CONSTANTIUS NOB C			Y
DUGM88	7	234	51/1	4C?	fragment					fragment	N
DUGM88	7	235	51/1	270-	AE4 12mm					irregular prob 4C rather than radiate	Y
DUGM88	7	236	53/1	364-378	AE3 17mm	SECURITAS REIPUBLICAE	OF II /?				?
DUGM88	7	237	55/1	335-341?	AE3 15mm	Gloria exercitus 1 standard?		head r			Y
DUGM88	7	238	56/1	330-335	AE3 17mm	GLORIA EXERCITUS 2 standards	missing	FLIULCONSTANTIUS[			N



Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
DUGM88	7	239	57/1	337-341	AE3 12mm+	PAX PUJ BL[ICA		eroded			N
DUGM88	7	240	59/1	330-	AE4 12mm			head r?			Y
DUGM88	7	241	59/1	335-341	AE3 14mm	Gloria exercitus 1 standard		head r		irregular?	N
DUGM88	7	242	60/1	330-335?	AE3 17mm	GLORIA EXERCITUS 2 standards					Y
DUGM88	7	243	62/2	350-364?	AE4 9mm					??fr etc irregular	Y
DUGM88	7	117a		341-348	AE3 15mm	VICTORIAE DD AUGG Q NN	TRP ?	head r		damaged, particularly obverse	N
DUGM88	7	117b		350-364	AE4 12mm	fallen horseman?				irregular ftr?	?
DUGM88	7	117c		350-364?	AE4 11mm	?		head r		irregular eg ftr??	?
DUGM88	7	120a		348-360?	AE2 20mm	?emperor and fallen horseman		DNCONSTA[			N
DUGM88	7	120b		4C	AE3 16mm						Y
DUGM88	7	120c		337-341?	AE3 14mm	figure of Pax Publica??					Y
DUGM88	7	123a		330-	AE3 17mm			head r			Y
DUGM88	7	123b		330-	AE3 15mm			head r			Y
DUGM88	7	123c		330-335	AE3 16mm	soldiers and standards		head r			Y
DUGM88	7	126a	topsoil	330-335	AE3 17mm	GLORIA EXERCITUS 2 standards	TRS ?				Y
DUGM88	7	126b	topsoil	335-341	AE3 16mm	Gloria exercitus 1 standard		head r		damaged and eroded	N
DUGM88	7	126c	topsoil	348-350	AE3 16mm	FEL TEMP REPARATIO phoenix on globe		DNCONSTAN] TIUSPFAUG		irregular?	N



Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
DUGM88	7	128a		330-?	AE3 14mm			head l?		eroded	Y
DUGM88	7	128b		350-364	AE4 12mm	fr fallen horseman				irregular	N
DUGM88	7	128c		330-335	AE3 13mm	victory on prow		head l		irregular?	N
DUGM88	7	227a	49/1	4C?	AE3 15mm	?		?		eroded	?
DUGM88	7	227b	49/1	330-341	fragment	standard?		head r		prob Gloria Exercitus, very eroded etc	N
DUGM88	7	230a	49/1	335-341	AE3 15mm	GLORIA EXERCITUS 1 standard	?	CONSTANTI NUSMA[XAUG?		irregular??	N
DUGM88	7	230b	49/1	337-341	AE3 14mm	quadriga		head r		irregular	N
DUGM88	7	230c	49/1	341-348	AE3	FEL TEMP] REPARATIO phoenix on pyre	missing	]JUS PF AUG head r		about half survives	N
DUGM88	9	162		335-342	AE3 14mm	Gloria exercitus 1 standard		head r		irregular	N
DUGM88	9	163		260-296?	antoninianus 18mm+					damaged	Y
DUGM88	9	165		4C	AE3 17mm						Y
DUGM88	9	167		330-341	AE3 16-17mm	soldiers and standard(s)?		head r			Y
DUGM88	9	170		350-364?	AE4 10mm					poss fr irregular ??	Y
DUGM88	9	182	66/1	330-?	AE3 13mm			head r??			Y
DUGM88	9	184	75/1	330-335	AE3 16mm	wolf and twins	missing	URBS ROMA		eroded	N
DUGM88	9	185	75/1	341-348	AE3 14mm	Victoriae ddauggqnn		head r		damaged, irregular?	N
DUGM88	9	188	75/1	330-?	AE3 14mm						Y
DUGM88	9	202	c 8/1	318-319?	AE3 18mm	VICTORIA[E LAETAE..... 2	STR	?IM]PCONSTANTINUSMAXAUG?		needs more work	N



Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
						victories facing over altar					
DUGM88	9	204a	1	341-348?	AE3 16mm	Victoriae dd Augg q nn??		head r			N
DUGM88	9	204b	1	341-348	AE3 16mm	Victoriae dd Augg q nn		]US PF AUG head r			Y
DUGM88	9	209a	74/1	330-335	AE3 17mm	GLORIA EXERCITUS 2 standards		CONSTANTINUS...			N
DUGM88	9	209b	74/1	335-341	AE3 15mm	GLORIA EXERCITUS 1 standard		head r			Y
DUGM88	9	209c	74/1	330-335	AE3 14mm	wolf and twins	.PTR	URBS ROMA		irregular?	N
DUGM88	9	209d	74/1	341-348	AE3 13mm	victoriae dd augg q nn	leaf/TR P	CONSTAN] SPFAUG	LRBC1, 140	irregular?	N
DUGM88	9	209e	74/1	335-364	AE4 11mm	?		head r?		irregular but poss based on GE 1 standard?	N
DUGM88	9	209f	74/1	350-364	AE4 12mm	fallen horseman?		head r		irregular ftr	N
DUGM88	9	209g	74/1	350-364	AE4 9mm	fallen horseman?		?		irregular ftr?	N
DUGM88	9	209h	74/1	330-335	AE3 15mm	victory on prow	CONS[	CONSTANTINOPOLIS			N
DUGM88	9	209i	74/1	324-??	AE3 15mm	Figure		DNFLCONS[			Y
DUGM88	9	209j	74/1	330-335	AE3 14mm	GLORIA EXERCITUS 2 standards	missing	head r			?
DUGM88	9	209k	74/1	330-335	AE3 16mm	wolf and twins	?	URBS ROMA			Y mm only
DUGM88	9	209l	74/1	350-364?	AE4 10mm	?		?		irregular ftr??, broken	N
DUGM88	9	209m	74/1	330-378	AE3 17mm	victory advancing left		?		broken and incomplete, victory either eg as Constantinopolis or Securitas Reipublicae - former	N



Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
										may be more likely	
DUGM88	9	212a	75/1	341-348??	AE3 15mm	victoriae dd augg q nn???		head r			Y
DUGM88	9	212b	75/1	330-	AE3 15mm	??		DNCONSTAN[			Y
DUGM88	11	249	97/1	330-	AE3 14mm			head r		eroded	Y
DUGM88	11	129a		317	AE2 20mm	SOLI INVICTO COMITI	S P?/PLN	IMPCONSTANTINUS AUG	RIC VII London, 106 or 107		N
DUGM88	11	129b		341-348	AE3 15mm	?VOT XX MULT XXX in wreath	missing	JR. IN USPFAUG		obv reading uncertain, damaged	N
DUGM88	11	129c		337-341	AE3 14mm	PAX PUBLICA	missing	FLIULHE] LENAFAUG			N
DUGM88	11	129d		337-341?	AE3 13mm	?PIETAS] ROMANA		head r			N
DUGM88	11	129e		MODERN?	21mm					flat thin disc, poss not a coin	N
DUGM88	11	248a	94/1	260-296?	antoninianus 19-25mm	?		?		eroded	Y
DUGM88	11	248b	94/1	350-364?	AE4 8mm	?		?		irregular ??ftr	Y
DUGM88	13	270	99/A/2	316-317	AE2 20mm	SOLI INVICTO COMITI	T? F/PLN	IMPCONSTANTINUSAUG?	RIC VII London 89		N
DUGM88	13	271a	99/A/1	3-4C	AE3 15mm						Y
DUGM88	13	271b	99/A/1	3-4C	AE3 14mm	?		?			Y
DUGM88	13	271c	99/A/1	330-335?	AE3 15mm			helmeted head as Urbs Roma or Constantinopolis			Y
DUGM88	15	189		330-337	AE3 14mm	victory on prow	?	CONSTANTINOPOLIS			N



Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
DUGM88	16	134	34/1	335-348	AE3 14mm	2 figures				eroded, victories or soldiers?	Y
DUGM88	16	135	34/1	4C	AE3 17mm						Y
DUGM88	16	136	34/1	260-296?	antoninianus 18-21mm					ID on basis of size	Y
DUGM88	16	137	34/1	324-330	AE3 18mm	PROVIDEN TIAE AUGC	PTR	CONSTAN [			Y
DUGM88	16	138	34/1	313-320	AE2 20mm	SOLI INVICTO COMITI				eroded	Y
DUGM88	16	139	34/1	3-4C	AE3 14mm						Y
DUGM88	16	142	42/1	4C	AE3 17mm						Y
DUGM88	16	143	42/1	348-350	AE2 20mm	FEL TEMP REPARATIO fallen horseman		head r		Magnentius, Decentius, Constantius??	Y
DUGM88	16	144	42/1	3-4C	AE3 17mm						Y
DUGM88	16	145	42/1	330-	AE3 13mm						Y
DUGM88	16	146	43/1	3-4C	AE3 17mm						Y
DUGM88	16	147	43/1	337-341?	AE3 17mm	PAX PU BL]ICA ?		head r			Y
DUGM88	16	148	43/1	?	?					fragments	N
DUGM88	16	149	c 8/1	350-364	AE4 10mm					irregular ftr etc?	Y
DUGM88	16	150	c 8/1	330-	AE3 15mm			head r			Y
DUGM88	16	151	c 8/1	1-2C?	as?					very uncertain	Y
DUGM88	16	153	43/1	260-296??	antoninianus 14mm+	?		radiate head r??		very uncertain, large part missing	Y
DUGM88	16	154	43/1	330-335	AE3 16mm	victory on prow?		Constantinopolis?			Y



Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
DUGM88	16	155	43/1	330-335?	AE3 18mm	victory on prow?					Y
DUGM88	16	156	43/1	330-	AE3 15mm	crouching figure?		head r		poss fir fallen horseman?, damaged	Y
DUGM88	16	157	43/1	4C?	AE3 12mm+					eroded etc ??	Y
DUGM88	16	158	43/1	330-?	AE3 14mm	?		?		eroded, uncertain	Y
DUGM88	16	159	42/1	e 4C	AE2 22mm			helmeted head l		from Xray	Y
DUGM88	16	160	42/1	e 4C	AE2 19mm	wreath?					Y
DUGM88	16	161	35/2	330-	AE3 14mm						Y
DUGM88	Field 2	203		350-364?	AE4 11mm	?		?		irregular	Y
DUGM88	Field 2	283	slot B	335-341	AE3 16mm	gloria exercitus 1 standard					Y
DUGM88	Field 2	286	slot A	286-293	antoninianus 20mm	?		JCARAUSIUSPTAU.			Y
DUGM88	Tr 2/1	82	2	364-378	AE3 18mm	Gloria Romanorum emperor and captive		head r			Y
DUGM88	Tr 2/1	83	2	e 4C?	AE2 21mm						Y
DUGM88	Tr 2/1	84	2	4C	AE3 17mm			head r			Y
DUGM88	Tr 2/1	94	2	310-324?	AE2 24mm	standing figure	? London	head r		v corroded, rev figure cf SOLI INVICTO COMITI or GENIO POP ROM	Y
DUGM88	Tr 2/1	97	2	364-378?	AE3 17mm	gloria romanorum?? Emperor l with captive behind		head r		eroded	Y
DUGM88	Tr 2/1	105		364-378	AE3 18mm	Gloria Romanorum, emperor and captive					Y



Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
DUGM88	Tr 2/1	106		350-364??	AE3 15mm	poss ftr fallen horseman		head r			Y
DUGM88	Tr 2/1	108		4C?	AE3/4					fragments	Y
DUGM88	Tr 2/1	110	8	330-341?	fragment	?		]CN? [head r		poss soldiers and standard(s)	N
DUGM88	Tr 2/1	303	9	353-360	AE3 18mm	FEL TEMP REPARATIO fallen horseman	CSLG? Lyons	head r	cf LRBC2, 253-261	regular?	Y
DUGM88	Tr 2/11	246	94	341-348	AE3 15mm	V]CTORIA[A DDAUGGQNN		CON]STA NSPFAUG ?		irregular??	N
DUGM88	Tr 2/13	250	8	260-296?	antoninianus 17mm			radiate head r?		uncertain	Y
DUGM88	Tr 2/13	252	99	337-341?	AE3 14mm	type as P R	(Rome)	head r		eroded. Rev figure type looks like good match, tho' R in r field may be lost	Y
DUGM88	Tr 2/13	253	99	341-348	AE3 15mm	VICTORIAE DD AUGG Q NN	?	head r			?
DUGM88	TR 2/13	256	99	335-341	AE3 13mm+	Gloria exercitus 1 standard	missing	head r		severe edge damage	N
DUGM88	Tr 2/13	258	99	364-378	AE3 17-19mm	securitas reipublicae		head r			Y
DUGM88	Tr 2/13	261	3	350-364?	AE4 10mm	?		?		eroded	?
DUGM88	Tr 2/13	263	3	341-348	AE3 15mm	victoriae dd augg q nn		CONSTAN] SPFAUG			N
DUGM88	Tr 2/13	264	3	330-	AE3 13mm			head r			Y
DUGM88	Tr 2/13	266	99/A	350-364?	AE4 9mm	?		head r		prob ftr irregular issue?, edges eroded	Y
DUGM88	Tr 2/13	288		330-335	AE3 13mm	victory on prow		helmeted head l		irregular?	N
DUGM88	Tr 2/13	254a	99	330-?	AE3 13mm					eroded, edge damage	Y



Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
DUGM88	Tr 2/13	254b	99	330-?	AE3 15mm	single ?figure		head r			Y
DUGM88	Tr 2/13	255a	99	350-364?	AE4 10mm	?		?		irregular ??fr etc	Y
DUGM88	Tr 2/13	255b	99	364-378	AE3 16mm	SECURITAS REIPUBLICAE	SCON[	DNVALEN] SPFAUG	as LRBC2, 532	edge damage, erosion	N
DUGM88	Tr 2/13	267a	99/B/1	330-335	AE3 16mm	GLORIA EXERCITUS 2 standards		CONSTANTI NUS MAX AUG			N
DUGM88	Tr 2/13	267b	99/B/1	350-364?	AE4 7mm					irregular, presumably fr ??	?
DUGM88	Tr 2/15	279	103	3-4C	fragment						Y
DUGM88	Tr 2/15	280	103	341-348	AE3 14mm	victoriae dd augg qnn		head r		irregular	N
DUGM88	Tr 2/3	118	18	330-335	AE3 17mm	victory on prow		Constantinopolis		flaking	N
DUGM88	Tr 2/3	132	33	337-341	AE3 15mm	P R or Pax publica				damaged	Y
DUGM88	Tr 2/3	133		330-?	AE3 13mm			female? Head r		from Xray	Y
DUGM88	Tr 2/5	273	81/A/1	327-328	AE2 18-19mm	PROVIDEN TIAEAUGG	PTRsy mbol	CONSTAN [TINUS]AUG	RIC VII Trier, 504		N
DUGM88	Tr 2/5	274	81/A/1	335-341	AE3 15mm	Gloria exercitus 1 standard					Y
DUGM88	Tr 2/5	276	81/A/1	330-	AE3 15mm	?		head r			Y
DUGM88	Tr 2/5	277	81/A/1	335-341	AE3 16mm	Gloria exercitus 1 standard	missing				Y
DUGM88	Tr 2/5	275a	81/A/1	330-335	AE3 14mm	GLORIA EXERCITUS 2 standards	missing				Y
DUGM88	Tr 2/5	275b	81/A/1	330-335	AE3 16mm	wolf and twins					Y



Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
DUGM88	Tr 2/7	113		330-335	AE3 16mm	GLORIA EXERCITUS 2 standards	?				Y
DUGM88	Tr 2/7	114		330-?	AE3 16mm	?		head r			Y
DUGM88	Tr 2/7	213a	51/A	330-335	AE3 18mm	victory on prow	TRP. ?	CONSTAN[TINOPOLIS			N
DUGM88	Tr 2/7	213b	51/A	330-?	AE3 14mm			head r		damaged and eroded	N
DUGM88	Tr 2/7	213c	51/A	350-364	AE4 11mm	fallen horseman?		?		irregular ftr	Y
DUGM88	Tr 2/7	213d	51/A	350-364	AE4 9mm	fallen horseman?		head		irregular ftr	N
DUGM88	Tr 2/7	213e	51/A	350-364	AE4 6mm	?		?		irregular ftr?	N
DUGM88	Tr 2/7	213f	51/A	350-364	AE4 9mm	?		?		irregular ftr?	N
DUGM88	Tr 2/7	213g	51/A	350-364	AE4 8mm	?		?		irregular ftr?	N
DUGM88	Tr 2/9	164		364-378	AE3 18mm	SECURITAS REIPUBLICAE				damaged	?
DUGM88	Tr 2/9	166		350-364	AE3 16mm	FEL TEMP REPARATIO fallen horseman		head r		irregular?	N
DUGM88	Tr 2/9	168		260-296?	antoninianus 16mm			radiate head??			Y
DUGM88	Tr 2/9	169		330-337	AE3 18mm	victory on prow	CONST	CONSTANTINOPOLIS		details of mm uncertain	?
DUGM88	Tr 2/9	222	73	341-348	AE3 14mm	victoriae dd augg q nn				irregular?	Y
DUGM88	Tr 2/9	220a	73	335-341	AE3 14-15mm	Gloria exercitus 1 standard		head r		irregular	?
DUGM88	Tr 2/9	220b	73	350-364?	AE4 11mm	?		head r		prob irregular ftr	?
DUGM88	Tr 2/9	289a		324-330	AE3 17mm	Providentiae Augg (or Caess)		head r			Y



Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
DUGM88	Tr 2/9	289b		270-296	antoninianus 16mm	figure				irregular	Y
DUGM88		1	topsoil	364-378	AE3 18mm	SECURITAS REIPUBLICAE	OF I/CON ?	DNVALEN SPFAUG	LRBC2, 516	SCATTER A	N
DUGM88		2	1	3-4C	AE3 15mm					prob 4C? SCATTER A	Y
DUGM88		4	topsoil	330-335	AE3 17mm	wolf and twins	damage d	UJRBS [ROMA		SCATTER C	N
DUGM88		6	topsoil	341-348	AE3 16mm	victoriae dd augg q nn		CONSTAN SPFAUG		SCATTER B	?
DUGM88		8	topsoil	330-335	AE3 17mm	GLORIA EXERCITUS 2 standards	?				Y
DUGM88		9	topsoil	335-341	AE3 16mm	GLORIA EXERCITUS 1 standard	?	]TIUSNOBC		SCATTER B	N
DUGM88		10	topsoil	310-330?	AE3 17mm	poss altar (cf beata tranquillitas)		]US PF A[UG		reverse badly damaged	N
DUGM88		15	topsoil	350-364	AE4 10mm	fel temp reparatio, poss hut type?	CS	head r		SCATTER C, irregular	N
DUGM88		16	topsoil	330-335?	AE3 14mm			helmeted head I as Urbs Roma		SCATTER C	Y
DUGM88		18	topsoil	348-350	AE3 18mm	FEL TEMP REPARATIO phoenix on pyre	TRP[	DN CONSTA [NS PF AUG	LRBC2, 33 or 36	edge damage etc, SCATTER B	N
DUGM88		19	topsoil	330-	AE3 14mm			head r		SCATTER C	Y
DUGM88		24	topsoil	4C?	AE3 15mm					SCATTER A	Y
DUGM88		25	topsoil	4C	AE3 16mm	altar???				SCATTER A, eroded	?
DUGM88		28	topsoil	341-348	AE3 14mm	victoriae dd augg q nn	D/TRP	CONSTAN [SPFAUG?	LRBC1, 150?	SCATTER A ?irregular	N
DUGM88		30	topsoil	330-335	AE3 16mm	wolf and twins	unclear	URBS ROMA		SCATTER C	N



Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
DUGM88		34	topsoil	330-341	AE3 13mm Gloria exercitus ???1 standard		TRS			SCATTER C	Y
DUGM88		35	topsoil	330-335	AE3 13mm+			helmeted head I as Urbs Roma		badly damaged, SCATTER B	Y
DUGM88		36	topsoil	330-?	AE3 13mm					SCATTER B	Y
DUGM88		37	topsoil	318-319?	AE3 17mm	VICTORIAE] LAET[		CONS[].. AUG		SCATTER B	Y
DUGM88		38	topsoil	341-348	AE3 16mm	VICTORIAE DDAUGGQNN	D/TRP	CONSTAN SPFAUG	LRBC1, 150?	SCATTER B	N
DUGM88		39	topsoil	332-333	AE3 18-19mm	wolf and twins	TR.P	URBS ROMA	RIC VII Trier, 542	SCATTER A	N
DUGM88		41	topsoil	330-335	AE3 14mm	victory on prow	?	CON[STANTIN]OPOLIS		irregular?	N
DUGM88		44	topsoil	3-4C	AE3 18mm					could be later 3C?, SCATTER B	Y
DUGM88		46	topsoil	330-335	AE3 18mm	victory on prow	Trier?	CONSTAN]TINOPOLIS		C on bag - poss same as scatter C?	N
DUGM88		47	topsoil	335-341	AE3 14mm	gloria exercitus 1 standard		head r		irregular? 'A' on bag	N
DUGM88		48	topsoil	350-364	AE4 12mm	fallen horseman		head r		irregular, 'C' on bag	N
DUGM88		49	topsoil	335-348	AE4 12mm	2 figures		head r		irregular, not clear if soldiers or victories, 'A' on bag	N
DUGM88		55	topsoil	348-350	AE3 18mm	FEL TEMP REPARATIO phoenix on globe	TRP.	DNCONSTAN] TIUSPFAUG	LRBC2, 34	damaged , 'B' on bag	N
DUGM88		57	topsoil	330-335	AE3 17mm	wolf and twins	wreath/ TRS	URBS ROMA	as LRBC1, 76	damaged	N
DUGM88		64	topsoil	350-364?	AE4 11mm	?		head r		damaged, ??irregular ftr	N



Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
DUGM88		66	topsoil	330-341?	AE3 14mm	soldiers and standard(s)?		head r		B' on bag	Y
DUGM88		67	topsoil	348-350?	AE3 18mm	FEL TEMP REPARATIO phoenix on globe	TRP ?	DN CONSTANS PF AUG	LRBC2, 39	B' on bag	N
DUGM88		68	topsoil	330-335	AE2 20mm	wolf and twins	wreath/TRS ?	URBS ROMA	as LRBC1, 76	very large but irregular flan, poorly struck*, SCATTER B	N
DUGM88		69	topsoil	350-364	AE3 14mm	fallen horseman?		head r		irregular	N
DUGM88		91	topsoil	330-?	AE3 17mm	?standing figures		head r		poss soldiers and standard??	Y
DUGM88		92	topsoil	341-348	AE3 15mm	VICTORIAE DDAUGGQNN	TR? Trier	head r		SCATTER A	?
DUGM88		93	topsoil	330-335	AE4 13mm	wolf and twins		helmeted head l		edge damage, ?irregular	N
DUGM88		95	topsoil	4C	AE3 16mm			head r		B' on bag	Y
DUGM88		96	topsoil	330-335	AE3 16mm			URBS ROMA		B' on bag	?
DUGM88		107		330-	AE3 15mm			head r			Y
DUGM88		124	topsoil	3-4C	AE3 15mm						Y
DUGM88		140	8/1?	3-4C	AE3 14mm+						Y
DUGM88		141	42/1	330-335	AE3 18mm	wolf and twins				from Xray	Y
DUGM88		285		3-4C	AE3 15mm						Y
DUGM88		372	55/1	335-341	AE3 15mm	Gloria exercitus 1 standard	TRS?	head r		eroded	?
DUGM88		284a	c 2/7	335-341	AE3 16mm	GLORIA EXERCITUS 1 standard		FLIULCONSTANTINUS[			Y
DUGM88		284b	c 2/7	341-348	AE3 15mm	VICTORIAE DDAUGGQNN	M/missing				N



Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
DUGM88		284c	c 2/7	320-321	AE3 16mm	VIRTUS EXERCIT, standard inscribed VOT XX	.PTR ?	head I	RIC VII Trier, 268-278	refine ID	Y
DUGM88		284d	c 2/7	330-335	AE3 17mm	victory on prow		CONSTANTINOPOLIS			?
DUGM88		284e	c 2/7	330-331	AE3 16mm	GLORIA EXERCITUS 2 standards	.PLG	CONSTANTINUSIUNNOBC	RIC VII Lyons, 244		N
DUGM88		284f	c 2/7	348-350	AE2 21mm	FEL TEMP REPARATIO hut	R'S Rome	COJNSTA NSPFAUG	LRBC2, 604		N
DUGM88 ?	?	MD	PMB1	330-335	AE3 16mm	GLORIA EXERCITUS 2 standards				irregular?, obv corroded	
DUGM88 ?	?	MD	PMB2	341-348	AE3 13-14mm	star in wreath	CONSA Constantinople	POP ROMANUS (?)	LRBC1, 1067		
DUGM88 ?	?	MD	PMB3	341-348	AE3 14mm	VICTOR]IAE DDA[UGGQNN		CONSTA[N] SPFAUG			
DUGM88 ?	?	MD	PMB4	341-348	AE3 14mm	victoriae dd augg q nn		head r			
DUGM88 ?	?	MD	PMB5	271-274?	antoninianus 16mm	figure I with wreath and palm branch		IMP C TE[TRICUS ?		irregular?	
DUGM88 ?	?	MD	PMB6	260-296?	antoninianus 18-20mm	standing figure				or poss e 4C, encrusted	Y
DUGM90		508	3018	270-296	antoninianus 18mm	]A AUG		DIVO CLAUDIO		irregular	N
DUGM90		512	3020/B/2	271-274	antoninianus 21mm	]AUG		CPIUESUTETRICUSCAES			N



Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
DUGM90		513	3500	260-296	antoninianus 25mm			radiate head r			Y
DUGM90		520	3500	1-2C?	sestertius?						Y
DUGM90		523	3500	1-2C	sestertius					poss Faustina?	Y
DUGM90		528	US?	260-296	antoninianus 17-20mm						Y
DUGM90		540	3017/C	e 4C	AE2 19mm	wreath?					Y
DUGM90		542	3017/C	270-296	antoninianus 19-27mm	figure		radiate head r		irregular	N
DUGM90		546	3015	335-341	AE3 13mm	GLORIA EXERCITUS 1 standard	missing	head r		irregular?	N
DUGM90		556	5066/A/3	271-296	antoninianus 18mm	]A AUGG		]ESUTETR[		irregular?	N
DUGM90		558	3013	330-335	AE3 17mm	wolf and twins	symbol PLG	URBS ROMA	RIC VII Lyons, 257		N
DUGM97	Tr 19	9	137	260-296	antoninianus 16-17mm			radiate head r			Y
DUGM97	Tr 19	12	137	260-296?	antoninianus 18-20mm					ID on general character ??	Y
DUGM97		1	10	270-296	antoninianus 14mm	?		radiate head r?		irregular	?
DUGM97		2	10	286-293?	antoninianus 17mm	]S AUG figure I with cornucopia in I hand - poss virtus?		]AUG radiate head r		poss T AUG, but bust looks like Carausius. Poss irregular?	N
DUGM97		4	155	301-303	AE1 26-28mm	GENIO POP ROM	symbol B over PLC		RIC VI Lugdunu m p250,		



Site code	Trench	SF No.	Cxt	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
									108b		
DUGM97		7	88	260-296	antoninianus 21mm	figure I		radiate head r		silvery', eroded	?
DUGM97		8	119	330-335	AE3 15-16mm	wolf and twins					Y
DUGM97		13	247	310-312	AE2 22m	ADVENTUS AUG, mounted emperor and captive	*? /PLN	CONSTANTINUS ?PFAUG	RIC VI London, 133		
DUGM97		14	247	341-348	AE3 15mm	victoriae dd augg q nn		head r		damaged, ?irregular	N
DUGM97		16	287	270-296	antoninianus 13mm+	?		radiate head r		irregular	N
DUGM99		21	1063	e 4C	AE2 24mm	GENIO POP ROM?		Constantine		CHECK	
DUGM99		22	1071	351-353	AE2 18mm	FELICITAS REIPUBLICAE	I A over ? RPLG	Magnentius	LRBC2, 213?	CHECK	
DUGM99		23	1306	260-296	antoninianus 16-18mm			radiate head		CHECK	
DUGM99		24	1307	260-296??	antoninianus 15-19mm					CHECK, 'hopeless'	



Table C.1.4: SLGM all coins

Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	5547	7701	270-296?	antoninianus 16mm	figure		?		irregular/	?
SLGM06	5733	9015	3-4C	AE3 18mm					eroded, damaged, date uncertain	?
SLGM06	5855	10306	270-296	antoninianus 17-19mm			radiate head r		irregular	?
SLGM06	5942	10682	330-	AE3 15mm			head r		very poor	?
SLGM06	10479		270-296	antoninianus 16mm	figure				irregular	?
SLGM06	10499		270-296	antoninianus 15mm			radiate head r		irregular	?
SLGM06	10500		350-364	AE3 18mm	fallen horseman		head r		irregular	?
SLGM06	10507		1-4C	AE2 26mm					very eroded and friable, ?too damaged to clean	?
SLGM06	10511		260-296	antoninianus 18mm			radiate head r			?
SLGM06	10512	6008	270-296??	AE4 12mm					irregular ?radiate, but poss later	?
SLGM06	10515	6008	324-328?	AE3 14mm	figure		FLIULHE[LENA...?			?
SLGM06	10528		260-296	antoninianus 19mm	figure l		radiate head r			?
SLGM06	10544		e 4C?	AE2 18mm	standing figure		head r?		friable	?
SLGM06	10560		330-?	AE3 14mm			head r			?
SLGM06	10571		350-364?	AE4 10mm					irregular	?
SLGM06	10609		270-296	antoninianus 14-16mm			radiate head r		irregular	?
SLGM06	10616		260-296?	antoninianus 20-23mm						?
SLGM06	10619		330-335	AE3 14mm	GLORIA EXERCITUS 2 standards				eroded, irregular?	?
SLGM06	10635		330-	AE3 13mm	standing figures				soldiers?	?
SLGM06	10638		260-296	antoninianus 22mm	figure?		radiate head r		damaged and eroded	?
SLGM06	10641		260-296	antoninianus 18-21mm	figure seated l		radiate head r		silvery, eroded	?
SLGM06	10648		260-296?	antoninianus 18mm	figure l				rev eroded, obv corroded	?
SLGM06	10658		341-348?	AE3 15mm	?victoriae dd augg q nn		head r		irregular	?
SLGM06	3	6037	270-296	antoninianus 17mm	figure		radiate head r		irregular?	N
SLGM06	5028	5301	271-296	antoninianus 17-20mm	figure l?		]TETRIC[US...		irregular	N



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	5108	6226	351-353	AE2 20mm	VICTORIAE [DD NN AUG ET CAE (5)	Lyons	DN DEC[ENTIUS NOB CAES			N
SLGM06	5371	7324	350-364	AE3 14mm	fallen horseman?		head r		irregular?, damaged	N
SLGM06	5377	7324	350-364??	AE2 12mm	?cf ftr fallen horseman		??		irregular, poss overstruck on radiate ?	N
SLGM06	5378	7324	341-348	AE3 15mm	VICTORIAE DD AUGG Q NN	TRP	CON[STAN SPF]AUG			N
SLGM06	5393	6008	260-296	antoninianus 18-21mm	figure		?radiate head r		irregular?	N
SLGM06	5395	7324	324-341	AE3 15mm	figure with infants		head r		damaged	N
SLGM06	5421	7356	324-330	AE2 19mm	SALUS REIPUBLICAE	PTR				N
SLGM06	5432	7329	335-341	AE3 13mm	GLORIA EXERCITS standard	1 missing	DNCONS] TANS AUG		irregular?	N
SLGM06	5441	7292	341-348	AE3 15mm	VICTORIAE DD AUGG Q NN	?	CONSTAN SPFAUG			N
SLGM06	5500	7650	330-335	AE4 12mm	wolf and twins		URBS ROMA		irregular?	N
SLGM06	5504	7585	260-296	fragment			radiate head r		eroded and heavily damaged	N
SLGM06	5521	7701	260-296	antoninianus 17-21mm			radiate head r		eroded	N
SLGM06	5544	7701	270-296	antoninianus 15-17mm	CO[NSECRATIO altar		DIVO CLAUDIO		irregular	N
SLGM06	5545	7701	260-296	antoninianus 19mm	figure		radiate head r			N
SLGM06	5546	7701	270-296	antoninianus 16mm	altar		radiate head r		irregular?	N
SLGM06	5613	7988	2-3C?	denarius??	figure l		head r		poss core of plated denarius???	N
SLGM06	5655	8311	270-296	antoninianus 14-18mm	?		head r		irregular	N
SLGM06	5656	8311	e 4C	AE1 27mm	?		?		cf SF 5678 but completely eroded	N
SLGM06	5713	9016	270-296	antoninianus 15mm	altar		radiate head r		irregular	N
SLGM06	5715	9016	271-296	antoninianus 17mm	SPES ?XP[		IMPCTE[TRICUS..		irregular?	N
SLGM06	5716	9016	271-296	antoninianus 16mm	?		IMPETRICUSPFAUG		irregular	N
SLGM06	5717	9016	270-296	antoninianus 17mm	figure		radiate head r		irregular	N
SLGM06	5718	9016	270-296	antoninianus 15mm	figure		radiate head r		irregular	N
SLGM06	5719	9016	270-296	antoninianus 15mm	figure		radiate head r		irregular	N



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	5720	9016	271-296	antoninianus 18mm	figure l		IMP TETRICUS[		irregular?	N
SLGM06	5721	9016	270-296	antoninianus 14mm	P]AX [AUG		radiate head r		irregular	N
SLGM06	5722	9016	270-296	antoninianus 11mm			radiate head r		irregular fragment	N
SLGM06	5723	9016	270-296	antoninianus 15mm	figure l		radiate head r		irregular	N
SLGM06	5728	9015	270-296	antoninianus 13mm			radiate head r		irregular	N
SLGM06	5729	9015	270-296	antoninianus 13mm			radiate head r		irregular	N
SLGM06	5730	9015	350-364	AE4 11mm	fallen horseman?		head r		irregular ftr	N
SLGM06	5731	9015	270-296	antoninianus 9mm	figure?		??radiate head r		irregular (very)	N
SLGM06	5732	9015	270-296	antoninianus 11mm			radiate head r		irregular	N
SLGM06	5739	9017	270-296??	antoninianus 11mm					irregular, whatever the date, eroded	N
SLGM06	5741	9017	270-296	antoninianus 13mm	?		radiate head r		irregular	N
SLGM06	5747	9434	335-341?	AE3 17mm	Gloria exercitus 1 standard?		head r			N
SLGM06	5775	9471	270-296	antoninianus 16mm	CONSECRATIO eagle		radiate head r		irregular	N
SLGM06	5776	9471	270-296	antoninianus 15mm			radiate head r		irregular	N
SLGM06	5777	9471	270-296	antoninianus 11mm	?		radiate head r		irregular	N
SLGM06	5778	9471	270-296	antoninianus 13mm	figure		radiate head r		irregular	N
SLGM06	5850	10309	260-296	antoninianus 17-19mm	]?TA AU[G figure		radiate head r?		very eroded	N
SLGM06	5870	10335	270-296	antoninianus 11mm	?		radiate head r		irregular, almost square	N
SLGM06	5890	10354	330-335	AE3 16mm+	GLORIA EXERCITUS standards	2 missing	CONSTANTII N]USN[OBCAES?		damaged	N
SLGM06	5900	10148	270-296	antoninianus 14mm	altar (as Consecratio?)		radiate head r		irregular	N
SLGM06	5907	10142		fragments					only tiny fragments	N
SLGM06	5909	5128	260-296	antoninianus 16mm	figure l		radiate head r			N
SLGM06	5937	10644	270-296	antoninianus 14mm	?		radiate head r		irregular	N
SLGM06	5949	10734	270-296	antoninianus 14mm	altar (as Consecratio?)		-		irregular, incomplete	N
SLGM06	5951	10757	260-296	antoninianus 17mm	?Mars l		radiate head r		irregular?	N
SLGM06	5957	10879	335-341	AE4 12mm	Gloria exercitus 1 standard		head r		irregular	N



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	5965	10914	270-296	antoninianus 16-18mm	figure		radiate head r		irregular	N
SLGM06	5967	10914	270-296	antoninianus 16mm	nonsense legend??. figure				irregular	N
SLGM06	10005		350-364?	AE4 11mm	fallen horseman?	?	head r??		irregular	N
SLGM06	10008		260-296	AE2 18mm	fig stg]NA REDUX	?	radiate head r		letters before REDUX not clear	N
SLGM06	10011		270-296	antoninianus 18mm	CONSECRA]TIO? altar		radiate head r		damaged, irregular?	N
SLGM06	10019		270-296	antoninianus 16mm	fig stg l, holding spear? in l hand	?	radiate bust r [R] above head		irregular	N
SLGM06	10022		324-	AE3 17mm	poss providentiae camp gate??	?	?		oddly corroded	N
SLGM06	10025		330-341?	AE3/4 11mm (d)	G]LOR]RIA EXERCITVS?, soldier visible	?	bust r		v.badly damaged and corrded	N
SLGM06	10039		350-364?	AE4 9mm	?	?	?		irregular ?fir??	N
SLGM06	10047		270-296	antoninianus 11mm	?	?	radiate head r		irregular	N
SLGM06	10048		270-296	antoninianus 12mm	fig	?	radiate head r		damaged, irregular fragment	N
SLGM06	10049		270-296	antoninianus 17mm	CONSE]CRATIO altar	?	head r, ?		irregular	N
SLGM06	10051		335-341	AE3 15mm	2 soldiers 1standard, gloria exercitvs	?	bust r			N
SLGM06	10052		260-296	antoninianus 17mm	fig stg l	?	radiate head r]S CAES		irregular?	N
SLGM06	10054		330-	AE3 16mm	?	?	?		eroded, just poss victory on prow??	N
SLGM06	10055		260-296	AE2 19mm	S]ALVSAV]G	?	radiate bust r IMPCV[] NUSPFAUG?			N
SLGM06	10057		330-	AE4 11mm	?	?	head r		irregular, prob fir 350-364?	N
SLGM06	10058		341-348	AE3 14mm	victoriae dd augg q nn	?	?			N
SLGM06	10061		270-296	antoninianus 14mm	?	?	radiate head r		irregular, incomplete	N
SLGM06	10064		270-296	antoninianus 16mm	?	?	radiate head r		irregular	N
SLGM06	10066		270-296	antoninianus 19mm	]SEXE AGG? Fig stg.l	?	IM]P radiate head r		irregular?	N
SLGM06	10067		260-296	antoninianus 16mm	fig stg l, r arm raised, lh holding staff?	?	]S PF AUG radiate head r		possibly victorinus no legend visible	N
SLGM06	10068		270-296?	antoninianus 19mm	[T AVG] deity stg l	?	radiate head r		irregular?	N



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10069		271-296	antoninianus 17mm	fig stg I before altar ?	?	TETRICUS		irregular	N
SLGM06	10071		350-364	AE4 11mm	fel temp reparatio, fallen horseman	?	bust, r		irregular	N
SLGM06	10072		337-341	AE4 14mm	PIET]AS ROMANA, Pietas holding children	?	FL MAX THEODOR]AE AVG? , bust of theodora r			N
SLGM06	10073		346-350	AE3 17mm	FEL TEM[P REPAR]TIO phoenix (2)	TRP.	bust r]STA[	LRBC p46 #32, 33	??ref irregular?	N
SLGM06	10075		324-330	AE2 18mm	PROV]DENTIAE AVGG camp gate	PTRsy mbol Trier	CONSTAN TINUS AUG bust r	RIC VII Trier, 475		N
SLGM06	10076		341-348	AE3 14mm	VICTORIAE DD AUGG] Q NN	TRP?	constan]? SPFAVG			N
SLGM06	10077		268-270	antoninianus 19mm	fig stg?	?	IMP C VICTORINVS [+H5 radiate head r		reverse unidentifiable	N
SLGM06	10079		260-296	damaged	figure	?	head r		v.badly damaged	N
SLGM06	10081		350-364	AE3 17mm	fel temp reparatio, phoenix on pyre	?	bust r		?irregular	N
SLGM06	10083		4C	AE3 17mm	?	?	head r		completely eroded	N
SLGM06	10084		271-296	antoninianus 19mm	fig stg I	?	radiate head r,]TETRICV[S ?		irregular?	N
SLGM06	10086		364-378	AE3 17mm	gloria romanorum, emperor and captive?	?	bust r		damaged	N
SLGM06	10087		270-296	AE2 18mm	fig stg I, P[AX AV[G?	?	radiate head r		irregular	N
SLGM06	10088		364-378	AE2 18mm	Victory adv I, SECVRITAS REI]PVBLICAE	OF in lf, ll in rf	bust, r		damaged	N
SLGM06	10089		253-268	antoninianus 18mm	DIANA]E? CONS AVG Antelope walking l	?	radiate head r [IMP GALLIENVV AVG]?	RIC V pt1, 180??	poss irregular?	N
SLGM06	10091		3-4C	damaged	?	?	?		fragment	N
SLGM06	10093		335-341	AE4 12mm	soldiers, 1 standard	?	?		damaged, irregular	N
SLGM06	10096		270-296	AE3 15mm	figure	?	headr		irregular	N
SLGM06	10097		270-296	antoninianus 13mm	?	?	radiate head r		damaged, irregular	N



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10099		350-364	AE4 12mm	fallen horseman	?	head r		irregular	N
SLGM06	10100		271-296	antoninianus 18mm	fig stg l	?	]ESU TET[RICUS		irregular	N
SLGM06	10102		270-296	antoninianus 17mm	?	?	radiate head r		damaged, irregular?	N
SLGM06	10103		367-375	AE3 18mm	SECV]RIT]AS REIPVBLICAE victory adv. L	CON*	DN] VALEN [S PF AVG bust r	LRBC p56 #523		N
SLGM06	10104		3-4C	AE2/3 19mm	?	?	?		eroded, but prob later 3C	N
SLGM06	10105		270-296	antoninianus 14mm	?	?	rasdiate head r		irregular	N
SLGM06	10107		330-335	AE3 15mm	2 soldiers 2 standards, gloria exercitvs	?	?		irregular	N
SLGM06	10119		335-341	AE3 16mm	soldiers and 1 standard	CONST Aries	CONSTANS?			N
SLGM06	10135		270-296	antoninianus 16mm	fig stg	?	radiate head r		irregular	N
SLGM06	10136		260-296?	AE2 20mm	VICTORIA [	?	radiate head r		modern damage makes obv legend difficult	N
SLGM06	10143		270-296	antoninianus 13mm	fig stg r, holding spear in r hand	?	?		damaged - irregular	N
SLGM06	10144		330-335	AE3 16mm	soldiers and standards	TRS.	?		damaged	N
SLGM06	10152		330-337	AE3 17mm	probably vic. stg. on prow (corroded)		Bust of Constantinopolis, con[STAN]tinopolis		irregular?	N
SLGM06	10153		270-296	antoninianus 17mm	?	?	]TRIC[radiate head r		irregular	N
SLGM06	10154		260-296	antoninianus 22mm	?	?	radiate head r		eroded	N
SLGM06	10155		268-270	antoninianus 20mm	fig stg l	?	IMP C]VICTORINVS PF AUG radiate head r			N
SLGM06	10157		270-296	antoninianus 17mm	fig stg l, r arm raised, lh holding spear?	?	radiate head r possibly victorinus		irregular	N
SLGM06	10165		260-296	antoninianus 19mm	?	?	radiate head r		eroded	N
SLGM06	10168		260-296	antoninianus 16mm	fig stg	?	radiate head r			N
SLGM06	10172		330-335	AE3 17mm	shewolf and twins	?	V]RBS [ROMA, helmeted bust l		irregular	N
SLGM06	10174		330-335	AE3 17mm	GLOR[IA]EXER[CITVS] 2 soldiers 2 standards	]PLG, lyon	FL IVL CO]NSTAN]TIVS NOB C, bust r, laur, cuirassed	LRBC, lyon, p7	may clean up well	N



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
								#199		
SLGM06	10175		335-341	AE3 15mm	2 soldiers 1standard, gloria exercitvs	TR[?]	bust r			N
SLGM06	10180		270-296	antoninianus 15mm	?	?	radiate head r		irregular, damaged	N
SLGM06	10181		270-296	AE3 15mm (d)	?	?	radiate head r		irregular	N
SLGM06	10183		270-296	AE2 17mm (d)	P]AX[AVG, pax stg l, holds branch in lh, staff? In rh	?	radiate head r		irregular	N
SLGM06	10185		3-4C	AE3 14mm	?	?	?		NOT A COIN?	N
SLGM06	10186		270-296	antoninianus 20mm	?	?	radiate head r		irregular	N
SLGM06	10198		3-4C	AE2 18mm	?	?	?		badly corroded	N
SLGM06	10200		364-378	AE3 17mm	SECURITAS REIPUBLICAE	?	bust r		damaged	N
SLGM06	10203		268-296	AE3 17mm	CONSECRATIO ?eagle	?	radiate head r		irregular?	N
SLGM06	10204		270-296	antoninianus 16mm	?	?	radiate head		v irregular	N
SLGM06	10213		270-296	antoninianus 17mm	fig	?	radiate head r		damaged, irreular?	N
SLGM06	10216		335-341	AE3 15mm	2 soldiers 1standard, gloria exercitvs	?	?		irregular	N
SLGM06	10219		270-296	antoninianus 11mm	fig stg l, feeding serpent?, salus aug?		head r		irregular	N
SLGM06	10223		271-296	antoninianus 18mm	fig stg	?	JESU T[ETRICUS?? radiate head r		damaged, ?irregular	N
SLGM06	10224		1-2C	dupondius/as	?	?	?			N
SLGM06	10226		341-348	AE3 14mm (d)	VICTORIAE] DDAV[G QNN	?	bust r		damaged, irregular	N
SLGM06	10227		335-341	AE3 16mm	soldiers and 1 standard	?	head r		irregular	N
SLGM06	10240		3-4C	AE4 12mm	?	?	?		irregular	N
SLGM06	10242		335-341	AE3 15mm	2 soldiers 1standard, gloria exercitvs	?	bust r			N
SLGM06	10245		341-348	AE3 16mm	Victoriae DD Augg q nn	TRSDot Trier	bust r			N
SLGM06	10251		330-335	AE4 14mm	wolf and twins	?	Urbs Roma		irregular	N
SLGM06	10255		260-296?	antoninianus 15-18mm	?	?	?		?ID	N



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10258		3-4C	AE2 19mm	?	?	?		eroded	N
SLGM06	10259		270-296	antoninianus 14mm	?	?	radiate head r		damaged, irregular	N
SLGM06	10260		335-341	AE3 14mm (d)	2 soldiers 1standard, gloria exercitvs	?	bust r		damaged, irregular	N
SLGM06	10261		270-296	antoninianus 11mm	CON[SERCRATIO? Eagle stg	?	radiate head r		irregular	N
SLGM06	10265		330-335	AE3 16mm	shewolf and twins	.)PL[G]	VRBS [ROMA], helmeted bust l	LRBC, lyon, p7 #200		N
SLGM06	10266		330-335	AE3 16mm	?victory on prow	?	Bust of Constantinopolis (helmeted l), const[AN]tinopolis		irregular??	N
SLGM06	10270		260-296	AE2 20mm	??	?	bearded head r		eroded	N
SLGM06	10278		335-341	AE3 14mm	2 soldiers 1standard, gloria exercitvs	?	bust r			N
SLGM06	10279		3-4C	AE3 16mm (d)	?	?	?		damaged	N
SLGM06	10283		341-348	AE3 15mm	2 victories, victoriae dd avgg q nn	TRP?	]STAN[bust r		possible copy, irregular issue?	N
SLGM06	10295		270-296	antoninianus 14mm (d)	?altar	?	radiate head r		irregular	N
SLGM06	10308		321-324	AE2 20mm	BEATA TRANQUIL]LITA[S	?	head r			N
SLGM06	10323		270-296	antoninianus 16mm (d)	fig stg	?	C...ESU TE[TRICUS radiate head r		irregular	N
SLGM06	10326		270-296	antoninianus 20mm	fig stg l	S]C ?	radiate head r		irregular	N
SLGM06	10328		260-296	antoninianus 18mm (d)	?	?	radiate head r		damaged	N
SLGM06	10331		270-296	antoninianus 16mm	?	?	radiate head r		irregular	N
SLGM06	10345		260-296	antoninianus 18mm (d)	fig stg	?	]CUS P[F AUG radiate head r		damaged	N
SLGM06	10348		70-96	sestertius	fig stg	?	bust r			N
SLGM06	10351		270-296	antoninianus 14mm (d)	?	?	radiate head r		damaged, irregular	N
SLGM06	10356		260-296	antoninianus 18mm	fig stg	?	radiate head r			N
SLGM06	10357		330-335	AE3 16mm (d)	soldiers and standards	?	?? FL IUL CON[head r		CON of obv legend is clear - young head	N
SLGM06	10361		341-348	AE3 15mm	2 victories, vict]oriae dd	?	]onstan[bust r			N



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
					a[vgg q nn?					
SLGM06	10363		270-296	antoninianus 16-20mm	fig	?	radiate head r		irregular	N
SLGM06	10364		330-335	AE3 17mm	victory on prow	?	CONSTANTINPOLIS, helmeted bust l			N
SLGM06	10366		271-274	AE3 18mm (d)	fig stg l	?	TETRICUS		irreular?	N
SLGM06	10368		270-296	antoninianus 19mm	?	?	radiate head r		irregular	N
SLGM06	10370		292-293	AE2 21mm	PAX AVG, pax stg l	ML SJP, london	IMP C CAR[AVSIVS P F AVG], radiate bust r			N
SLGM06	10373		260-296	antoninianus 16mm (d)	?	?	radiate head r		damaged	N
SLGM06	10376		271-296	AE2 18mm (d)	fig stg l	?	TETRICUS barbarous radiate head r		irregular	N
SLGM06	10377		222-235	plated denarius	?	?	IMPCMA[VRSEVAL]EXANDA[V G], bust r		plated copy?	N
SLGM06	10379		260-296	antoninianus 16mm	COA[AU]G fig stg l	?	radiate head r			N
SLGM06	10381		330-	AE3 16mm	wreath	?	helmeted head r			N
SLGM06	10386		270-296	antoninianus 12mm (d)	altar	?	radiate head r		irregular	N
SLGM06	10394		3-4C	AE2 20mm	?	?	?			N
SLGM06	10400		353-354	AE2 19mm	FEL TEMP REPARATIO, fallen horseman	D over PCON Arles	DN CONSTANTIV[S PF AVG], bust r	LRBC II, 455	poss irregular	N
SLGM06	10408		330-335	AE3 16mm	Victory on prow	?	CONSTANTINOPOLIS			N
SLGM06	10411		270-296	antoninianus 14mm	?	?	radiate head r		irregular	N
SLGM06	10414		341-348	AE3 15mm (d)	victoriae dd augg q nn	?	bust r		damaged	N
SLGM06	10422		341-348	AE3 14mm (d)	2 victories, victoriae dd avgg q nn?	e//TRP, trier	bust r		damaged	N
SLGM06	10424		330-335	AE3 16mm	GLORIA EXERCITVS 2 soldiers 2 standards	TRP.	FL IVL C[ON]STANTIVS NOB C, bust r, laur, cuirassed	LRBC, trier, p5 #57		N
SLGM06	10426		260-296	antoninianus 17-21mm	?	?	?		damaged	N
SLGM06	10427		3-4C	AE2 20mm (d)	?	?	?		damaged	N
SLGM06	10428		3-4C	AE3 16mm	?	?	?		poss late 3C?	N



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10429		287-293	AE2 22mm	?	?	[?]CARAVSIVS[?], radiate head r			N
SLGM06	10430		335-341	AE3 14mm (d)	2 soldiers 1standard, gloria exercitvs	?	bust r		damaged	N
SLGM06	10431		270-296	antoninianus 20mm (d)	?	?	radiate head r		damaged, ?irregular	N
SLGM06	10433		333	AE3 18mm	GLORIA EXERCITVS 2 soldiers 2 standards	PCONS T, arles	CONSTANTINVS MAX AVG	RIC VII, arles, p274 #370	v.good example	N
SLGM06	10436		330-335	AE3 14mm	victory on prow (corroded)	?	CONSTANTINOPOLIS?, Helmeted bust l		corroded	N
SLGM06	10443		260-296	antoninianus 20mm (d)	fig stg l	?	radiate head r		damaged	N
SLGM06	10446		330-335?	AE3 15mm	soldiers and standards?	?	head r			N
SLGM06	10450		3-4C	AE2/3 18mm (d)	?	?	?		damaged	N
SLGM06	10454		270-296	antoninianus 15mm	CON[SECRATIO altar	?	DIVO CLAU]DIO		irregular	N
SLGM06	10455		270-296	antoninianus 18mm	fig stg l, cornucopia	?	]CLAU		reverse' may be overstruck, irregular	N
SLGM06	10458		4C	AE3 16mm (d)	?	?	head r		damaged	N
SLGM06	10460		1-2C	sestertius	?	?	?		worn flat	N
SLGM06	10463		3-4C	AE4 12mm	?	?	?		?4C	N
SLGM06	10465		3-4C	AE3 17mm	?	?	?			N
SLGM06	10466		270-296	antoninianus 15mm (d)	?	?	radiate head r		damaged	N
SLGM06	10468		268-270	antoninianus 19mm (d)	fig stg l	?	[?]VICTORINVS[?], radiate head r		damaged	N
SLGM06	10469		270-296	AE3 16mm (d)	]AUGG fig stg l	?	radiate head r		irregular	N
SLGM06	10472		270-296	antoninianus 16-20mm	fig stg, [?]IDERT	?	]S AUGradiate head r		irregular, rev legend appears garbled	N
SLGM06	10477		335-341	AE3 14-16mm	GLORIA EXERCITUS 1 standard	?TRP	CONSTAN[]PFAUG		irregular?	N
SLGM06	10478		1-2C	sestertius	figure standing l		head r		eroded	N
SLGM06	10481		260-296	antoninianus 18mm	figure		radiate head r			N



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10483		313-317	AE2 20mm	GENIO POP ROM	?	IMP? LICINIUSPFAUG			N
SLGM06	10487		320-324	AE2 19mm	BEATA TRANQUILLITAS	T I over PLG ?	CONSTANTINUSPFAUG		mintmark ???	N
SLGM06	10488		197-211	denarius	]II CCOS III PP seated+G80 figure I		SEVERUS []G		damaged	N
SLGM06	10489		318-319	AE3 17mm	VICTORIAE LAETAE PRINC PERP	STR ?	IMPCONSTAN TINUS MAX AUG	as RIC VII Trier, 209		N
SLGM06	10501		335-341	AE3 14mm	GLORIA EXERCITUS 1 standard		head r			N
SLGM06	10504		260-296	antoninianus 18mm	figure I		radiate head r			N
SLGM06	10508		268-270?	antoninianus 17mm	figure I		]VICTORINUS		regular?	N
SLGM06	10510		270-296	antoninianus 12-14mm	altar		radiate head r		irregular	N
SLGM06	10513	6008	270-296	antoninianus 17mm	CONSECRATIO eagle		radiate head r			N
SLGM06	10514	6008	350-364	AE4 14mm	fallen horseman		head r		irregular	N
SLGM06	10516	6008	270-296	antoninianus 18mm	figure		radiate head r		irregular	N
SLGM06	10517	6008	341-348	AE4 14mm	victoriae dd augg q nn		head r		irregular, damaged	N
SLGM06	10521	6008	330-335	AE3 18mm	wolf and twins		URBS ROMA			N
SLGM06	10523	6008	3-4C	AE2 19mm	?				fragment	N
SLGM06	10526	6008	341-348	AE3 13mm	Bridge	CONSA Constan tinople	POP ROMANUS head I	LRBC1, 1066		N
SLGM06	10527	6008	323-324	AE3 18mm	SARMATIA DEVICTA	PTRsy mbol	CONSTAN TINUSAUG	RIC VII Trier 435-8		N
SLGM06	10530		286-293	AE1 25mm	??		?IMPCARAUUSPFAUG		rev almost flat	N
SLGM06	10531		330-335	AE3 15-18mm	victory on prow		CONSTANTINOPOLIS			N
SLGM06	10533		341-348	AE3 15mm	VICTORIAE DD AUGG Q NN		head r		irregular?	N
SLGM06	10534		330-335	AE3 17mm	wolf and twins	TRS	URBS ROMA			N
SLGM06	10535		270-296	antoninianus 18mm	?		radiate head r		irregular, damaged	N



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10539		270-296?	antoninianus 16mm			radiate head r/		irregular?, damaged	N
SLGM06	10540		275-276	antoninianus 20-23mm			IMPCLTACITUSAUG			N
SLGM06	10541		341-348	AE3 15mm	VICTORIAE DD AUGG Q NN		head r			N
SLGM06	10543		350-364	AE3 15mm	FEL TEMP REPARATIO fallen horseman		head r		just poss regular, but damaged at edges	N
SLGM06	10544		330-335	AE3 16mm	wolf and twins	symbol/ TRP??	URBS ROMA		irregular/	N
SLGM06	10546		330-335	AE3 16mm	GLORIA EXERCITUS standards	2 missing	? FLIULCONSTANTIUS[		irregular?	N
SLGM06	10547		270-296	antoninianus 14mm	figure l		radiate head r		irregular	N
SLGM06	10548		270-296	antoninianus 17mm+			radiate head r		irregular and damaged	N
SLGM06	10550		260-296	antoninianus 19mm	FELICITAS AUG		radiate head r			N
SLGM06	10552		330-335	AE3 13mm	wolf and twins	?	URBS ROMA			N
SLGM06	10567		335-341	AE3 14mm	Gloria exercitus 1 standard	missing	head r		irregular?	N
SLGM06	10568		335-341	AE3 13mm	Gloria exercitus 1 standard		head r		irregular?	N
SLGM06	10569		286-293	AE1 24mm	PROV[ID	S P ?	IM[P CARA]JUSIUSPFAUG			N
SLGM06	10573		270-296	antoninianus 17mm	CO[NSECRATIO altar		DIVO CLAUDIO ?		irregular	N
SLGM06	10575		330-335	AE3 15mm	GLORIA EXERCITUS standards	2 TRP.	FLIULCONSTANTIUSNOBC ?			N
SLGM06	10576		270-296	antoninianus 17mm	altar		radiate head r		irregular	N
SLGM06	10584		350-364	AE3 14mm	fallen horseman?		CONSTAN TIUS.AUG		irregular	N
SLGM06	10589		1-2C	dupondius	female figure standing l, S C		head r		legends all worn away, obv appears unbearded	N
SLGM06	10596		270-296?	antoninianus 15mm			radiate head r		irregular, damaged	N
SLGM06	10598		260-296	antoninianus 15-17mm	figure		radiate head r?		irregular?	N
SLGM06	10603		330-335	AE3 18mm	GLORIA EXERCITUS standards	2 R wreath P	CONSTANTI] NUSMAXAUG	LRBC1, 542		N
SLGM06	10610		138-161	sestertius	standing figure		]UGPI US[			N
SLGM06	10611		286-293??	antoninianus 23mm			IMP [		Carausius??, damaged	N



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10613		330-335	AE3 15mm	victory on prow		CONSTANTINOPOLIS			N
SLGM06	10621		335-341	AE3 15mm	Gloria exercitus 1 standard	TR. ?				N
SLGM06	10625		335-341	AE3 14mm	Gloria exercitus 1 standard		CONS]TANTIUSAU[G		irregular	N
SLGM06	10627		270-296	antoninianus 15mm	?Sol I		radiate head r		irregular	N
SLGM06	10628		117-138?	sestertius	figure standing I SC		]ANUS [head r		rev legened worn off. Obv damaged in chin area, but prob Hadrian rather than Trajan	N
SLGM06	10629		350-364?	AE4 11mm					irregular	N
SLGM06	10630		330-335	AE3 16mm	GLORIA EXERCITUS 2 standards	TR.S	]ANTIUSNOBC			N
SLGM06	10637		260-296?	antoninianus 18-21mm	figure		radiate head r		irregular?	N
SLGM06	10645		337-341	AE3 14mm	?P R , figure		head r		irregular?	N
SLGM06	10649		260-296	antoninianus 18mm	figure I		radiate head r			N
SLGM06	10653		310-312	AE2 22mm	GENIO POP ROM	* PLN ? /	IMP MAXIMINUS PFAUG	RIC VI London, p 136, 209b		N
SLGM06	10657		341-348	AE3 13mm	VICTORIAE DD AUGG Q NN		head r		irregular	N
SLGM06	11108		3-4C	AE3 16mm (d)	?	?	?		damaged	N
SLGM06	11118		330-335	AE3 15mm	2 soldiers 2 standards, gloria exercitvs	?	?			N
SLGM06	15051		330-	AE3/4 15mm (d)	?	?	?		damaged	N
SLGM06	*10249		?	?	?	?	?		probably not a coin!	N
SLGM06	*10346		?	?	?	?	?		probably not a coin!	N
SLGM06	10045a		270-296	antoninianus 17mm	fig stg I,	?	radiate head r		irregular	N
SLGM06	10045b		260-296	antoninianus 18mm	figure standing	?	radiate head r		badly corroded	N
SLGM06	10061b		270-296	antoninianus 19mm	?	?	radiate head r		irregular	N
SLGM06	10176a		330-335	AE3 15mm	2 soldiers 2 standards, gloria exercitvs	?	bust r		damaged	N
SLGM06	10178b		270-296	antoninianus 18mm	fig	?	radiate head r		irregular	N



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10178c		324-341	AE3/4 15mm (d)	figure with children	?	head r		irregular, damaged, rev pietas or spes	N
SLGM06	10178d		270-296	antoninianus 12mm	?	?	head r		irregular	N
SLGM06		8471	270-296	antoninianus 11mm	figure		radiate head r		SS 5126, irregular	N
SLGM06	5000	5001	330+	AE3 16-17mm			head r			Y
SLGM06	5001	5001	3C?	antoninianus? 21-22mm	standing figure		head r			Y
SLGM06	5002	5001	250-296	antoninianus 18-20mm			radiate head r?			Y
SLGM06	5007	5260	4C	AE3 17mm						Y
SLGM06	5008	5264	3-4C	22mm						Y
SLGM06	5011	5264	250-296??	17-20mm						Y
SLGM06	5012	5264	330-335	AE3 17mm	wolf and twins	TRS? Trier				Y
SLGM06	5013	5013	2C?	dupondius/as?						Y
SLGM06	5014	5014	330-335??	AE3 18mm			head l, poss Constantinopolis			Y
SLGM06	5016	5267	e 4C	AE2 19mm	?		young head l			Y
SLGM06	5018	5267	270-296	antoninianus 15mm			radiate head r		irregular	Y
SLGM06	5019	5267	3-4C?	24mm						Y
SLGM06	5020	5267	3-4C	21mm						Y
SLGM06	5025	5301	260-296	antoninianus 18mm	standing figure					Y
SLGM06	5027	5301	260-296	antoninianus 18-19mm			head r			Y
SLGM06	5031	5297	330-335?	AE3 15mm	soldiers and standards?					Y
SLGM06	5087	6043	330-335	AE3 16mm	Gloria Exercitus, soldiers and standards	?	CONSTANTINUS AUG			Y
SLGM06	5175	6279	4C?	AE2 20mm			head r			Y
SLGM06	5179	6279	260-296	antoninianus 20mm	figure l (poss Salus?)		radiate head r			Y
SLGM06	5262	6973	e 4C	AE2 24mm			head r			Y
SLGM06	5358	5358	270-296	antoninianus 18-21mm			radiate head r		irregular	Y
SLGM06	5359	6008	341-348	AE3 16mm	VICT[OR]IAEDDAUGGQJNN	TRP	head r		upper mm symbol not visible	Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
						Trier				
SLGM06	5360	6008	260-296	antoninianus 17-19mm			radiate head r		rays barely visible and v friable, will probably be lost in cleaning	Y
SLGM06	5374	6008	3-4C	15-17mm						Y
SLGM06	5379	7324	321-324	AE3 18mm	? IOVI CONSERJVATORI	SM??	..LIJCINIUSNOBC, helmeted head l		Jupiter? l with captive behind?, damaged and friable. Could be any one of several eastern mints all starting with SM... eg SMHA (Heraclea) or SMNA (Nicomedia)	Y
SLGM06	5389	7336	e 4C?	AE2 22mm						Y
SLGM06	5390	7336	330-335	AE4 12mm	GLORIA EXERCITUS standards	2 .TPS			irregular	Y
SLGM06	5392	7324	330-?	AE3 14mm	poss figures?		head r?			Y
SLGM06	5394	6008	260-296	antoninianus 17mm			radiate head r			Y
SLGM06	5397	7324	350-364??	AE3 15mm	fallen horseman?		head r		irregular if ftr type	Y
SLGM06	5399	6008	3-4C	19mm						Y
SLGM06	5400	6008	3-4C	17mm						Y
SLGM06	5401	6008	3-4C	18mm						Y
SLGM06	5409	7329	350-364?	AE4 12mm	?		head r		irregular ??ftr type	Y
SLGM06	5425	7344	3-4C	AE3 15mm						Y
SLGM06	5448	7402	3-4C	AE3 15mm					prob 4C?	Y
SLGM06	5566	7701	260-296	antoninianus 17-19mm	figure l		radiate head r			Y
SLGM06	5567	7701	260-296	antoninianus 16-19mm	figure		radiate head r		eroded	Y
SLGM06	5606	7952	e 4C?	AE2 25mm	figure (possibly winged)		head r		very friable	Y
SLGM06	5678	8452	301-303	AE1 28mm	GENIO POP ULI ROMANI	A / PLC Lyons	CONSTANTIUSNOBCAES	cf RIC VI Lyons pp251-2 nos 128-156		Y
SLGM06	5685	6008	260-296	antoninianus 18mm			radiate head r			Y
SLGM06	5695	8727	260-296	antoninianus 19mm			radiate head r			Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	5705	8751	e 4C?	AE3 18mm			head r			Y
SLGM06	5714	9016	270-296?	antoninianus 11mm			??radiate head r		irregular	Y
SLGM06	5737	9016	3-4C	AE3 18mm						Y
SLGM06	5740	9017	3-4C	AE3 18mm					eroded	Y
SLGM06	5749		260-296	antoninianus 20mm	figure		radiate head r			Y
SLGM06	5761	9471	3-4C	AE3 15mm					uncertain, irregular?	Y
SLGM06	5769	9327	260-296	antoninianus 18-21mm			radiate head r?			Y
SLGM06	5774	9471	330-	AE3 16mm			head r			Y
SLGM06	5795	9731	3-4C	AE3 13mm					eroded, uncertain	Y
SLGM06	5815	9869	350-364	AE3 15mm	fallen horseman?		head r		irregular/	Y
SLGM06	5816	9869	260-296	antoninianus 15-19mm			radiate head r			Y
SLGM06	5849	10143	260-296	antoninianus 20mm			radiate head r			Y
SLGM06	5852	10279	3-4C	AE3 18mm						Y
SLGM06	5853	10302	260-296	antoninianus 18mm			radiate head r			Y
SLGM06	5891	10369	3-4C	AE3 17mm	?		?		damaged	Y
SLGM06	5893	10372	260-296?	antoninianus 18mm	figure l		radiate head r?			Y
SLGM06	5905	10149	260-296?	antoninianus 17-18mm			radiate head r?			Y
SLGM06	5955	10841	330-?	AE3 16mm	figures?		head r			Y
SLGM06	5961	10912	323-324	AE2 20mm	CAESARUM NOSTRORUM, VOT X in wreath	?	head r			Y
SLGM06	5964	10914	313-320	AE2 22mm	SOLI INVICTO COMITI		NTINUSAUG			Y
SLGM06	5966	10914	e 4C	AE2 21mm	figure, sol or genius?		head r			Y
SLGM06	10001		260-296	antoninianus 17mm	?	?	head r			Y
SLGM06	10002		3-4C	AE4 14mm	?	?	?			Y
SLGM06	10003		1-2C	sestertius	?	?	?			Y
SLGM06	10007		3-4C	AE2 20mm	?	?	?			Y
SLGM06	10009		270-	AE4 14mm	?	?	?		irregular radiate or fr??	Y
SLGM06	10012		330-335	AE3 17mm	victory on prow	?	constantinopolis			Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10014		330-335?	AE3 18mm	wolf and twins?	?	?			Y
SLGM06	10016		e 4C	AE2 20mm	figure 9genio pop rom or soli invicto comitit?	?	?			Y
SLGM06	10017		270-296?	AE4 11mm	?	?	radiate head r??		v poor	Y
SLGM06	10018		3-4C	AE2 21mm	?	?	?			Y
SLGM06	10020		330-	AE4 14mm	?	?	head r		rev poss wolf and twins???	Y
SLGM06	10021		330-?	AE3 15mm	?figures	?	?		badly corroded	Y
SLGM06	10024		260-296	antoninianus 19mm	?	?	radiate head r,]DICVS[?		may clean up well	Y
SLGM06	10026		293-296	antoninianus 20mm	?	?	ALL]ECTUS AUG			Y
SLGM06	10030		260-296	antoninianus 19mm	?	?	radiate head r			Y
SLGM06	10050		364-378?	AE3 18mm	Securitas reipublicae??					Y
SLGM06	10053		260-296	antoninianus 19mm	LAETITIA AUG	?	radiate head r			Y
SLGM06	10056		260-296	antoninianus 21mm	?	?	head r		damaged	Y
SLGM06	10059		270-296	antoninianus 16mm	?	?	radiate head r		irregular	Y
SLGM06	10060		330-	AE4 14mm	figures	?	?		soldiers or victories??	Y
SLGM06	10062		330-335	AE3 16mm	wolf and twins	?	VRBS] ROMA helmeted bust l			Y
SLGM06	10063		268-270	antoninianus 21mm	?	?	IMP C CLA[V]DIVS AVG radiate head r			Y
SLGM06	10065		320-324	AE2 19mm	BEA]TA TRANQ[VILLITAS altar, globe, 3stars	?	IVL CRI[SP]VS NOB C, bust r		may clean up well	Y
SLGM06	10070		260-296	antoninianus 23mm	MONETA AVG moneta stg l	?	?			Y
SLGM06	10074		335-341	AE3 16mm	soldiers and 1 standard	?	CONSTANS PF AUG bust r			Y
SLGM06	10078		270-296	antoninianus 19mm	pax stg l, P[AX] AVG? V in lf		radiate head r	RIC V 1, vol p397 #118	CHECK REF???	Y
SLGM06	10080		3-4C	AE3 17mm	?	?	?		??	Y
SLGM06	10082		3-4C	AE4 13mm	?	?	?		badly damaged	Y
SLGM06	10085		270-	AE4 12mm	?	?	?		irregular radiate or (eg) ftr type?	Y
SLGM06	10090		260-296	antoninianus 17mm	LA]ETITIA AV[G laetitia stg	?	radiate head r			Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
					!?					
SLGM06	10092		3-4C	AE3 16mm	?	?	?			Y
SLGM06	10094		e 4C	AE3 17mm	?	?	]NTINUS[]NOBC[			Y
SLGM06	10095		260-296	antoninianus 17mm	?	?	radiate head r			Y
SLGM06	10098		260-296	antoninianus 19-23mm	?	?	]STINUS[		obv legend uncertain	Y
SLGM06	10106		330-335	AE3 15mm	victory on prow	?	constan tinopolis? (corroded)			Y
SLGM06	10111		3-4C	AE3 17mm	?	?	?		eroded	Y
SLGM06	10112		270-296	antoninianus 18mm	?	?	radiate head r		irregular?	Y
SLGM06	10113		e 4C	AE3 17mm	?	?	head r			Y
SLGM06	10114		260-296	antoninianus 20-27mm	?	?	?		oval flan	Y
SLGM06	10115		330-	AE3 16mm	?	?	head r?			Y
SLGM06	10116		330-	AE3 15mm	?	?	head r			Y
SLGM06	10117		330-??	AE3 14mm	Figure(s)?/	?	?			Y
SLGM06	10118		3-4C	AE3 17mm	?	?	?		badly corroded	Y
SLGM06	10120		330-	AE3 15mm	?	?	head r			Y
SLGM06	10121		3-4C	AE3 16mm	?	?	?			Y
SLGM06	10122		260-296	antoninianus 19mm	?	?	radiate head r?			Y
SLGM06	10124		3-4C?	AE3/4 14mm	?	?	?		?4C	Y
SLGM06	10125		! 3-e 4C	AE2 20mm	altar?	?	head r			Y
SLGM06	10126		260-296	antoninianus 20mm	?	?	radiate head r			Y
SLGM06	10129		3-4C?	AE2/3 18mm	?	?	?		badly corroded	Y
SLGM06	10130		260-296?	antoninianus 17mm	?	?	?radiate head r			Y
SLGM06	10131		330-335?	AE3 16mm	gloria exercitvs? (standards?)	(2 ?	CONSTAN]TI NUS MAX [AUG			Y
SLGM06	10132		260-296?	antoninianus 20mm	?	?	radiate head r?			Y
SLGM06	10133		330-335	AE3 17mm	soldiers and standards?	?	?			Y
SLGM06	10134		348-353	AE3 17mm	?fel temp reparatio, emperor and captive??	?	CON]STANTIVS[? Bust r		rev type ??? - only Thessalonica	Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10137		3C?	antoninianus 19mm	fig flanked by two animals	ANN?	radiate head r [AVG]?		many uncertain letters in obv legend - poss earlier 3C?	Y
SLGM06	10138		260-296	antoninianus 21mm	?	?	radiate head r			Y
SLGM06	10139		313-318	AE2 24mm	SOLI IN[VICT]OCO[MITI	?	CONSTANT[]AUG			Y
SLGM06	10140		3-4C	?	?	?	?			Y
SLGM06	10141		330-335	AE4 13mm	wolf and twins	?	head l			Y
SLGM06	10142		330-335	AE3 14mm	soldiers and standards	?	?		irregular?	Y
SLGM06	10145		3-4C	AE3 16mm	?	?	?			Y
SLGM06	10146		324-330	AE2 20mm	providentiae augg (or caess), camp gate	?	CONSTAN [			Y
SLGM06	10147		324-330	AE2 18mm	SECURITAS REIPUBLICAE	?	FL .H]ELENA AUGUSTA			Y
SLGM06	10148		351-353?	AE2 18mm	victoriae dd nn aug et cae??	?	?			Y
SLGM06	10149		3-4C	AE3 15mm	?	?	?		?4C	Y
SLGM06	10151		270-296	antoninianus 20mm	? Sol walking l., r hand raised?, * in lf		radiate head r		irregular??	Y
SLGM06	10158		3-4C	AE4 13mm	?	?	?			Y
SLGM06	10159		4C?	AE3 17mm	?	?	head r		poss earlier - eg core of plated denarius??	Y
SLGM06	10160		330-	AE3 16mm	?	?	CO[			Y
SLGM06	10162		260-296	antoninianus 18mm	?	?	radiate head r		badly corroded and worn	Y
SLGM06	10163		3-4C	AE2 22mm	three figures??	?	?		??early 4C	Y
SLGM06	10164		e 4C	AE2 21mm	?	?	]S.ORTC..S bust r ?		fragmentary obv and rev legends not currently intelligible	Y
SLGM06	10166		330-335	AE3 16mm	soldiers and standards	?	?			Y
SLGM06	10167		3-4C	AE3 14mm	?	?	?		badly damaged	Y
SLGM06	10169		96-117	as/quadrans	figure seated left ??		]CAES NERVA T[RAIAN.....			Y
SLGM06	10170		260-296	antoninianus 23mm	fig stg l	?	radiate head r			Y
SLGM06	10171		e 4C	AE2 20mm	?	?	head r			Y
SLGM06	10173		286-293	antoninianus 25mm	?	?	[?]CARAVIVS[?], radiate head r		damaged, half left!	Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10177		260-296	antoninianus 19mm	?	?	radiate head r			Y
SLGM06	10179		260-296	antoninianus 18mm	?	?	radiate head r			Y
SLGM06	10182		313-315	AE2 27mm	SO[LI IN]VICT[O] COMITI, sol rad, stg l, raisin rh, globe in lh	PTR, T | F	bust r	RIC VII, trier, p168 #41-2 (comp)		Y
SLGM06	10184		141-175	sestertius	fig stg l	?	]FAUSTINA AUG?		prob Faustina II but not certain	Y
SLGM06	10187		161-175	sestertius	?	?	]AUGUSTA female head r		Faustina II under M Aurelius?	Y
SLGM06	10188		260-296?	antoninianus 18mm	?	?	radiate head r?		irregular?	Y
SLGM06	10189		260-296	antoninianus 20mm	?HILA[RITAS AUG fig stg l	?	?radiate head r			Y
SLGM06	10190		161-192	sestertius	fig stg	?	bearded head r, prob Aurelius or Commodus			Y
SLGM06	10192		3-4C	AE2 18mm	?	?	?		badly corroded	Y
SLGM06	10195		270-296?	antoninianus? 17mm	?	?	?		irregular	Y
SLGM06	10196		260-296	antoninianus 18mm	?	?	radiate head r		badly corroded	Y
SLGM06	10197		e 4C	AE2 20mm	?	?	head r			Y
SLGM06	10199		e 4C?	AE2 24mm	?	?	?			Y
SLGM06	10201		3-4C	AE2 20mm (d)	?	?	?			Y
SLGM06	10202		346-351	AE2 22mm	FEL TEMP REPARATIO galley	?	?			Y
SLGM06	10205		350-364?	AE4 12mm	fr fallen horseman???	?	?		irregular	Y
SLGM06	10206		260-296	antoninianus 22mm	SA[LVS] AVG, salus feeding serpent	?	bust r ?			Y
SLGM06	10207		280-320	AE2 24mm	?	?	?			Y
SLGM06	10208		3-4C	AE2 19mm	?	?	?			Y
SLGM06	10209		320-324	AE2 22mm	?beata tranquillitas	?	?			Y
SLGM06	10210		323-324?	AE2 20mm (d)	BEATA TRJAN[QVILLITAS altar, globe, 3stars	?	CONSTAN [TINVS AVG, bust r		damaged may clean well	Y
SLGM06	10211		270-296	AE4 12mm	?	?	?		irregular	Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10212		350-364?	AE4 10mm	emperor and fallen horseman??	?	?		irregular, whatever the date	Y
SLGM06	10214		3-4C	AE2 19mm	?	?	bust r, female?			Y
SLGM06	10217		1C	dupondius/as	?	?	bust r, tiberius?		damaged	Y
SLGM06	10218		1-3C	dupondius/as	?	?	?		may clean up well	Y
SLGM06	10220		324-325	AE2 18mm	PROVIDE]NTIAE CAESS camp gate	STR	bust l	RIC VII, trier, p205, #455-6	CHECK ref	Y
SLGM06	10221		260-296	antoninianus 20mm	pax avg? pax stg l, holing branch?	?	radiate head r			Y
SLGM06	10225		1-2C	sestertius	fig stg l, r arm raised	?	bust r, female?		poss Faustina II?	Y
SLGM06	10231		3-4C	AE2 18mm	?	?	?			Y
SLGM06	10232		3-4C	AE3 17mm	?	?	?			Y
SLGM06	10233		4C	AE2 19mm	?	?	?			Y
SLGM06	10234		330-335?	AE2 19mm	victory on prow? (corroded)	?	head l		ID uncertain	Y
SLGM06	10235		324-330	AE2 20mm	PROVIDE]NTIAE (AUGG or CAESS) camp gate	?	head r			Y
SLGM06	10236		330-335	AE3 17mm	soldiers and standards	?	?			Y
SLGM06	10237		3-4C	AE2 22mm	?	?	?			Y
SLGM06	10238		320-324	AE2 18mm	BEATA TRAN]QUILLITAS altar	?	?			Y
SLGM06	10239		330-337	AE3 16mm	victory on prow? (corroded)	?	CONSTAN[TINOPOLIS]? Helmeted bust l		corroded	Y
SLGM06	10241		3-4C	AE2 21mm	?	?	?			Y
SLGM06	10244		330-335	AE3 17mm	shewolf and twins	.PLG?	V]RBS [ROMA, helmeted bust l	LRBC, lyon, p7 #190 (comp)	may clean up well	Y
SLGM06	10246		341-348?	AE3/4 13mm (d)	Victoriae dd augg q nn??	?	?		irregular	Y
SLGM06	10247		1-2C	sestertius	?	?	head r			Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10250		260-296	antoninianus 19mm	?	?	radiate head r			Y
SLGM06	10252		335-341	AE3 16mm	soldiers and 1 standard	?	?			Y
SLGM06	10253		3-4C	AE2 23mm	?	?	?		?early 4C	Y
SLGM06	10254		313-315	AE2 24mm	GENIO] POP ROM. genius stg I, cornucopiae on I arm.	PTR, T | F	bust r	RIC VII, trier, p168 #57-58 (comp)		Y
SLGM06	10257		260-296	antoninianus 19mm	?	?	radiate head r			Y
SLGM06	10263		320-321	AE2 20mm	VIRTUS EXERCIT?, trophy with captives?	?	CRISPUS[helmeted bust r			Y
SLGM06	10264		260-296	antoninianus 21mm	?	?	radiate head r			Y
SLGM06	10267		260-296	antoninianus 16mm	?	?	radiate head r			Y
SLGM06	10271		330-	AE3 16mm	?	?	?			Y
SLGM06	10272		260-296	antoninianus 17mm	?	?	radiate head r		irregular?	Y
SLGM06	10273		260-296	antoninianus 19mm	?	?	radiate head r			Y
SLGM06	10275		4C?	AE3 16mm	?	?	head r?			Y
SLGM06	10277		e 4C	AE2 21mm	?	?	head r			Y
SLGM06	10279		335-341?	AE3 16mm	soldieers and 1 standard?	?	?			Y
SLGM06	10280		3-4C	AE3 15mm	?	?	?		may clean up well	Y
SLGM06	10282		320-324	AE2 21mm	Beata tranquillitas	?	IUL CRISPUS NOB		rev very badly centred	Y
SLGM06	10284		3-4C	AE3/4 13mm	?	?	?		irregular	Y
SLGM06	10285		320-324?	AE2 19mm	altar - ?beata tranquillitas	?	?		badly corroded	Y
SLGM06	10287		330-335	AE3 16mm	wolf and twins	?	URBS ROMA			Y
SLGM06	10288		3-4C	AE3 14mm	?	?	?			Y
SLGM06	10289		293-305	AE1 26mm	poss genio pop rom?	?	CONSTANTIUS NOBCS		may clean up well	Y
SLGM06	10289		330-?	AE3 16mm	?	?	head r?			Y
SLGM06	10290		3-4C	AE4 11mm	?	?	?		irregular, radiate or FTR??	Y
SLGM06	10291		270-296?	antoninianus 19mm	?	?	?		ID speculative, on general character	Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10292		260-296?	AE2 19mm	?	?	radiate head r?			Y
SLGM06	10294		4C?	AE2 18mm	?	?	head r			Y
SLGM06	10296		320-324	AE2 20mm	BEATA TRANQUILLITAS altar	?	?			Y
SLGM06	10299		3-4C	AE2 21mm	?	?	?			Y
SLGM06	10301		3-4C	AE2 22mm	?	?	?		may clean up well	Y
SLGM06	10302		260-296	antoninianus 26mm??	?	?	?			Y
SLGM06	10303		320-324	AE2 19mm	BEATA TRANQUILLITAS	?	?			Y
SLGM06	10304		4C	AE2 20mm	?	?	head r			Y
SLGM06	10305		e 4C	AE3 17mm	wreath	?	head r		may clean up well	Y
SLGM06	10306		270-320?	AE2 22mm	VICTORIA OTTHI??	?	?		late 3C-e 4C. Rev poss for Victoria Gothica but with two Ts???	Y
SLGM06	10307		324-327	AE3 19mm	DN CONSTANTINI MAX AVG?, wreath	?	?			Y
SLGM06	10309		260-296	antoninianus 18-20mm	?	?	radiate head r			Y
SLGM06	10310		320-324	AE2 20mm	BEATA TRANQUILLITAS	?	CONSTANTINUS AUG			Y
SLGM06	10311		330+	AE3 15mm	?	?	head r			Y
SLGM06	10313		3-4C	AE3 17mm	?	?	?			Y
SLGM06	10315		260-296	antoninianus 18mm	?	?	radiate head r		may clean up well	Y
SLGM06	10316		268-270	AE2 20mm	fig stg	?	VICTORINVS?, radiate head r		edge damage	Y
SLGM06	10317		330-	AE3 15mm	?	?	head r			Y
SLGM06	10318		330-	AE4 14mm	?	?	head r			Y
SLGM06	10319		4C	AE3 17mm	standing figures	?	?			Y
SLGM06	10320		330-	AE3 15mm	?	?	?			Y
SLGM06	10321		270-296?	antoninianus 15mm	?	?	?		irregular??	Y
SLGM06	10322		3-4C	AE3 16mm	?	?	?			Y
SLGM06	10324		260-296	antoninianus 19mm	fig stg	?	?		may clean up well	Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10327		253-260	AE2 19mm	D[EO VOLKAN]O, vulcan in temple, pincers and anvil	?	radiate head r		may clean up well	Y
SLGM06	10329		270-296	antoninianus 11mm	?	?	radiate head r		irregular	Y
SLGM06	10330		330-335?	AE3 16mm	soldiers and standards?	?	?			Y
SLGM06	10343		260-296	antoninianus 17mm	?	?	?		irregular?	Y
SLGM06	10347		3-4C	AE2 20mm	?	?	?		may clean up well	Y
SLGM06	10349		3-4C	AE2 24mm	?	?	?		may clean up well	Y
SLGM06	10350		268-270	AE2 20mm	?	?	[?VI]CTORIN[VS?], radiate head r		may clean up well	Y
SLGM06	10352		4C	AE3 17mm	?	?	head r			Y
SLGM06	10355		320-330?	AE2 19mm	two figures	?	CONSTANTI NUS MAX AUG		may clean up well	Y
SLGM06	10365		260-296	antoninianus 18mm	VIRTU[S AUG	?	?		irregular	Y
SLGM06	10367		320-324	AE2 18mm	BEAT[A TRANQVILLITAS], ?	?	DN CRISPVS N[OB]C+H346 helmeted head l		may clean up well	Y
SLGM06	10369		324-326	AE2 20mm	providentiaevgg?, camp gate	[PL]ON, london	?		may clean up well	Y
SLGM06	10374		270-296	antoninianus 16mm	figure l?	?	radiate head r		irregular	Y
SLGM06	10375		3-4C	AE2/3 18mm (d)	?	?	?		damaged	Y
SLGM06	10378		260-296	antoninianus 20mm	fig stg	?	radiate head r			Y
SLGM06	10380		3-4C	18mm	?	?	?		may clean up well	Y
SLGM06	10382		3-4C	AE2 20mm	?	?	?		late 3C?	Y
SLGM06	10383		1-2C	dupondia/as?	?	?	?		may clean up well	Y
SLGM06	10387		286-305?	antoninianus 22mm	PAX AVGG, pax stg l	ll	m]AXIMIAN[radiate bust r		obv reading not certain	Y
SLGM06	10387		290-294	AE2 22mm	fig seated l, r arm raised holding small victory	?	radiate head r	RIC V, Lyon, p267 #399 (comp)	may clean up well	Y
SLGM06	10388		e 4C?	AE2 19mm	?	?	head ?l			Y
SLGM06	10389		260-296	Antoninianus 20mm	?	?	radiate head r		may clean up well	Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10390		260-296	antoninianus 19-21mm	?	?	radaite head r			Y
SLGM06	10391	4C		AE3 18mm	?	?	head r			Y
SLGM06	10392		260-296	antoninianus 17mm	?	?	radiate head r?+H369		may clean up well	Y
SLGM06	10393	1-4C		dupondius/as?	?	?	?			Y
SLGM06	10395		330-335?	AE3 15mm	wolf and twins?	?	?		irregular	Y
SLGM06	10396	3-4C		AE3 17mm	?	?	?			Y
SLGM06	10397	4C		AE2 19mm	wreath	?	?			Y
SLGM06	10398	3-4C		AE3 16mm	?	?	?			Y
SLGM06	10402	3-4C		AE2 19mm	?	?	?		may clean up well	Y
SLGM06	10403		330-	AE3 15mm	two (or poss three) figures standing	?	head r			Y
SLGM06	10404		330+	AE3 15mm	poss figures??	?	head r			Y
SLGM06	10406		330-335	AE4 12mm	?	?	head l		cf Urbs Roma	Y
SLGM06	10407		260-296	antoninianus 22mm	?	?	radiate head r		may clean up well	Y
SLGM06	10409	3-4C		AE3 17mm	?	?	?		may clean up well	Y
SLGM06	10410		307-313?	AE2 24mm	GENIO POP ROM	?PLN	]IUS PF AUG laureate head r			Y
SLGM06	10412	1-2C		dupondius/as?	?	?	bust r?		may clean up well	Y
SLGM06	10413		320-324	AE3 18mm	BEATA TR]ANQVILLITAS, altar, globe, 3 stars	?	CONSTANTINVS AVG, bust r			Y
SLGM06	10415	3-4C		AE2 19mm	?	?	?		may clean up well	Y
SLGM06	10416		260-296	antoninianus 20mm	?	?	radiate head r		?irregular	Y
SLGM06	10418		306-350	AE2 20mm	figure	?	]STANTIN[, bust r			Y
SLGM06	10420		330-	AE3 15mm	?	?	head r			Y
SLGM06	10421	3-4C		AE3 17mm	?	?	?			Y
SLGM06	10425	1-2C?		as/quadrans?	?	?	?		worn flat	Y
SLGM06	10432		259-268	antoninianus 19mm	FORTV[NA AVG]?, fortuna stg l	?	? GALLIENUS AVG		may clean up well	Y
SLGM06	10434		268-270	antoninianus 20mm	?	?	[?]VICTO]RINVS PFAVG?, radiate head r			Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10435		330-	AE4 13mm	?	?	head r		just poss FTR type?	Y
SLGM06	10437		3-4C	AE3 18mm	two standing figures	?	?			Y
SLGM06	10438		260-296	antoninianus 23mm	?	?	radiate bust r		may clean up well	Y
SLGM06	10439		330-335	AE3 17mm	victory on prow? (corroded)	?	CONSTANTINOPOLIS?, Helmeted bust l			Y
SLGM06	10441		3-4C	AE3 17mm (d)	?	?	?		just over half survives	Y
SLGM06	10444		260-296	antoninianus 17mm	fig stg	?	?			Y
SLGM06	10447		330-	AE3 14mm (d)	?	?	head r		badly corroded	Y
SLGM06	10449		260-296	antoninianus 18mm (d)	?	?	radiate head r		damaged	Y
SLGM06	10451		4C	AE3 15mm	?	?	head r			Y
SLGM06	10452		260-296	antoninianus 17-22mm	?	?	radiate head r		irregular?	Y
SLGM06	10453		3-4C	AE4 12mm	?	?	?		may clean up well	Y
SLGM06	10456		1-3C	sestertius	?	?	?		may clean up well	Y
SLGM06	10457		364-378	AE2 19mm	Securitas reipublicae?	?	DNVALEN[			Y
SLGM06	10459		3-4C	AE3 18mm	?	?	?		may clean up well	Y
SLGM06	10461		3-4C	AE3 17mm	?	?	?			Y
SLGM06	10462	6008	341-348	AE3 15mm	Victoriae dd augg q nn	TRPdot Trier	head r		irregular?	Y
SLGM06	10464		286-293	antoninianus 23mm	?	?	[[J]MPC CA[RAUSIUS]?, radiate head r		damaged	Y
SLGM06	10467		3-4C	AE2 19mm	?	?	?		may clean up well	Y
SLGM06	10470		260-296	antoninianus 18mm	?	?	radiate head r			Y
SLGM06	10471		3-4C	20mm	?	?	?		prob late 3C	Y
SLGM06	10473		260-296	antoninianus 19mm			radiate head r			Y
SLGM06	10474		268-270?	antoninianus 17-21mm			IMPCCLA[UDIUS		regular?	Y
SLGM06	10475		260-296	antoninianus 18mm	?		radiate head r			Y
SLGM06	10476		330-?	AE3 15mm					very eroded	Y
SLGM06	10485		260-296	antoninianus 18mm			radiate head r			Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10486		260-296	antoninianus 16-19mm			?radiate head r			Y
SLGM06	10490		260-296	antoninianus 18mm	figure		radiate head r			Y
SLGM06	10491		259-268	antoninianus 21mm	figure		]POSTU[MUS...		regular?	Y
SLGM06	10494		260-296	antoninianus 17-19mm			radiate head r			Y
SLGM06	10495		260-296	antoninianus 20mm			radiate head r			Y
SLGM06	10497		3-4C	AE3 15mm						Y
SLGM06	10498		260-296	antoninianus 20mm	]ENA[figure l					Y
SLGM06	10503		260-296	antoninianus 18mm			radiate head r			Y
SLGM06	10509		270-296	antoninianus 17mm			radiate head r		damaged	Y
SLGM06	10518	6008	330-	AE3 14mm	?CHECK		head r		irregular?	Y
SLGM06	10519	6008	260-296	antoninianus 18mm	]AUG		radiate head r?			Y
SLGM06	10520	6008	3-4C	AE2 23mm						Y
SLGM06	10522	6008	260-296	antoninianus 18mm			radiate head r		irregular?	Y
SLGM06	10532		260-296	antoninianus 17mm	figure		radiate head r		irregular?	Y
SLGM06	10536		260-296	antoninianus 16-19mm			radiate head r			Y
SLGM06	10537		3-4C	AE3 15mm						Y
SLGM06	10538		260-296	antoninianus 17-19mm			radiate head r?			Y
SLGM06	10545		260-296?	antoninianus 23mm	figure		head r		uncertain, large thin flan	Y
SLGM06	10549		2C?	sestertius			head r			Y
SLGM06	10551		1-2C	sestertius			head r			Y
SLGM06	10553		330-335	AE3 18mm	GLORIA EXERCITUS 2 standards		head r			Y
SLGM06	10554		260-296	antoninianus 18mm			radiate head r		irregular?	Y
SLGM06	10555		348-350??	AE2 16-19mm	poss fallen horseman??		DN[head r		very uncertain	Y
SLGM06	10556		3-4C	AE3 16mm						Y
SLGM06	10557		260-296	antoninianus 21mm			radiate head r			Y
SLGM06	10559		260-296?	AE1 22-24mm						Y
SLGM06	10561		260-296	antoninianus 17mm	?					Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10562		330-?	AE3 15-16mm			head r			Y
SLGM06	10565		260-296	antoninianus 16mm			radiate head r			Y
SLGM06	10566		313-320	AE2 20mm	SOLI INVICTO COMITI		head r			Y
SLGM06	10572		330-?	AE3 15mm						Y
SLGM06	10574		271-274	antoninianus 20mm			TETR		?regular	Y
SLGM06	10578		260-296	antoninianus 21mm			radiate head r			Y
SLGM06	10580		3-4C	AE3 15mm						Y
SLGM06	10581		260-296	antoninianus 20mm	]AUG					Y
SLGM06	10583		293-296	antoninianus 19mm	?		IMPCALLECTUSPFAUG ?			Y
SLGM06	10583		324-326?	AE2 19mm	?		]FAUSTAAUG			Y
SLGM06	10585		335-341	AE3 16mm	Gloria exercitus 1 standard	?				Y
SLGM06	10586		3-4C	AE3 17mm						Y
SLGM06	10587		260-296	AE1 20-25mm			radiate head r			Y
SLGM06	10588		260-296	antoninianus 17-20mm	figure		radiate head r			Y
SLGM06	10591		e 4C	AE2 21mm			head r			Y
SLGM06	10592		260-296	antoninianus 16mm	figure(s)		radiate head r			Y
SLGM06	10593		1-2C	sestertius			?female head r			Y
SLGM06	10594		270-296?	antoninianus 16mm			radiate head r		irregular?	Y
SLGM06	10595		260-296	antoninianus 17mm+			radiate head r		damaged	Y
SLGM06	10597		e 4C	AE2 19mm			head r			Y
SLGM06	10599		260-296	antoninianus 21mm			radiate head r			Y
SLGM06	10600		260-296	antoninianus 17-20mm	figure		radiate head r			Y
SLGM06	10601		260-296	antoninianus 18mm			radiate head r		poss irregular/	Y
SLGM06	10602		260-296	antoninianus 20mm			radiate head r			Y
SLGM06	10604		260-296	antoninianus 16-19mm			radiate head r			Y
SLGM06	10605		293-296	antoninianus 21mm			IMPCALL[ECTUS..			Y
SLGM06	10606		e 4C?	AE2 20mm						Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	10607		3-4C	AE2 18mm					uncertain	Y
SLGM06	10608		3-4C	AE2 23mm						Y
SLGM06	10612		260-296	antoninianus 20mm			radiate head r			Y
SLGM06	10615		260-296	antoninianus 16-18mm			radiate head r			Y
SLGM06	10617		3-4C	AE2 22mm					damaged, corroded	Y
SLGM06	10618		260-296	antoninianus 18mm	figure		radiate head r			Y
SLGM06	10620		330-	AE3 15mm	figures				?GE soldiers	Y
SLGM06	10623		260-296	antoninianus 23mm			radiate head r			Y
SLGM06	10626		260-296	antoninianus 18-21mm						Y
SLGM06	10631		260-296	antoninianus 18-21mm	figure l		radiate head r			Y
SLGM06	10632		260-296	antoninianus 21mm	]JUGG		radiate head r		regular	Y
SLGM06	10633		260-296	antoninianus 16-18mm			radiate head r			Y
SLGM06	10634		260-296	antoninianus 16mm	?		radiate head r			Y
SLGM06	10636		330-341?	AE3 17mm	GLORIA [EXERCITUS?		head r			Y
SLGM06	10639		3-4C	AE3 17mm					eroded at edges	Y
SLGM06	10640		335-341?	AE3 16mm	GLORIA EXERCITUS standard?	1	]CONSTA[			Y
SLGM06	10642		260-296	antoninianus 21mm	large figure		radiate head r		poss late 3-early 4C	Y
SLGM06	10643		260-296?	antoninianus 20mm					?date on general character	Y
SLGM06	10647		e 4C?	AE3 18mm	?		radiate head l?			Y
SLGM06	10650		3-4C	AE3 12-14mm					uncertain	Y
SLGM06	10651		260-296?	antoninianus 16-18mm					uncertain	Y
SLGM06	10652		350-364?	AE4 12mm					irregular ftr? But poss earlier	Y
SLGM06	10655		3-4C	AE2 22mm					corroded, could be late 3 or early 4C?	Y
SLGM06	11101		260-296	antoninianus 18-21mm	figure standing l	?	?			Y
SLGM06	11102		260-296	antoninianus 17-20mm	?	?	?		may clean up well	Y
SLGM06	11103		260-296	AE2 20mm	?figure??	?	radiate head r			Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	11107		3-4C	AE2 20mm	?	?	?			Y
SLGM06	11109		260-296	antoninianus 19mm	standing figure	?	?		may clean up well	Y
SLGM06	11110		330-	AE3 18mm	?	?	DJN CON[STAN].....			Y
SLGM06	11111		270-296	antoninianus 19mm	?	?	?		irregular	Y
SLGM06	11112		270-296	antoninianus 15mm	?	?	radiate head r		irregular, ?clipped	Y
SLGM06	11113		260-296	antoninianus 19mm	figure	?	radiate head r		may clean up well	Y
SLGM06	11115		3-4C	AE3 16mm	?	?	?			Y
SLGM06	11117		1-2C	sestertius	?	?	?		may clean up well	Y
SLGM06	11120		3-4C	AE2 21mm	?	?	?			Y
SLGM06	11121		260-296	antoninianus 17mm	?	?	radiate head r			Y
SLGM06	11122		271-274	antoninianus 19mm	??[HILAR]ITAS AVGG, fig stg	?	IMP C TETRICUS??			Y
SLGM06	11124		268-270	antoninianus 18mm	PAX AVG, pax stg I holding olive branch	?	IMP C VIC[TORINUS			Y
SLGM06	15049		3-4C	AE2 23mm	?	?	?		may clean up well	Y
SLGM06	10176b		348-360	AE2 18mm	FEL TEMP [REPARATIO fallen horseman	[R?]PL G	?		irregular	Y
SLGM06	10178a		260-296?	antoninianus 20mm	?	?	?		general charcter	Y
SLGM06	10280a		3-4C	AE3 15mm	?	?	?			Y
SLGM06	10298a		260-296	antoninianus 20mm	?	?	radiate head r			Y
SLGM06	10298b		323-324	AE2 19mm	CAESARUM NOSTRORUM, VOT X in wreath	?	?			Y
SLGM06	5010a	5264	3-4C	17mm						Y
SLGM06	5010b	5264	3-4C	23mm						Y
SLGM06	5015a	5264	e 4C??	AE2 19mm						Y
SLGM06	5015b	5264	293-296?	quinarius' 19-20mm	VIRTUS AUG galley		Allectus??			Y
SLGM06	5015c	5264	330-335	AE3 17mm	GLO[RIA EXERCITUS soldiers and standards	PCONS T Arles				Y
SLGM06	5029a	5301	3-4C	22mm						Y



Site code	SF No.	Context	Est Date	Denomination	Rev	Mint	Obv	Ref	Comment	Clean
SLGM06	5029b	5301	260-296	antoninianus 19-21mm	figure?		radiate head r			Y
SLGM06	5558a	7696	330-?	AE3 16mm			head r			Y
SLGM06	5558b	7695	330-?	AE3 16mm						Y
SLGM06	10577		324-330	AE2 19mm	PROVIDENTIAE Camp gate	AUGG ?	CONSTANTINUSIUNNOBC			Y mm only
SLGM06	10505		1-2C	sestertius	standing figure		head r			Y obv only
SLGM06	5724	9016	307-310	AE2 25mm	GENIO POP ROM	PLN	IMP CONSTANTINUS PF AUG	RIC VI, London, 103		
SLGM06	*10046				?	?	?		lead weight??	
SLGM06	*10150								RING	
SLGM06	*10243		?	?	?	?	?			
SLGM06	*5736	9017							metal either totally corroded or absent	
SLGM06		9470	330-341?	AE3 13mm	Soldiers and standard(s)?	?	?		SS 5127	
SLGM06		8471	270-296?	antoninianus 16mm	figures		radiate head r?		SS 5126, irregular?	

C.2 Metalwork

Ian Scott

Methodology

The metalwork from both Gill Mill Phase 1 (site codes DUGM 1988 – DUGM 2001) and Phase 2 (Rushy Common and Tar Farm, site codes SLGM 2004-2008) has been fully recorded at the assessment phase. All metalwork has been assigned to functional categories to facilitate the assessment, and eventually the analysis, of the assemblage(s).

Table C.2.1: Gill Mill: Summary of metal finds by site area and by count

Site Area(s)	Site Code	fe	cu alloy	pb	Total
<i>Phase 1 (DUGM)</i>					
1	DUGM 1988	-	-	-	-
2	DUGM 1988	188	25	38	251
3	DUGM 1988	-	-	-	-
4	DUGM 1989	1	-	-	1
	DUGM 1990	74	2	12	88
metal detecting	DUGM 1989	11	10	2	23
6, 7	DUGM 1993	-	-	-	-
6, 7, 8	DUGM 1995	160	1	1	162
9	DUGM 1997	41	1	-	42
	DUGM 1998	3	-	-	3
	DUGM 1999	-	-	-	-
10	DUGM 1990	-	-	-	-
13	DUGM 2000	-	-	-	-
	DUGM 2003	-	-	-	-
	DUGM 2008	-	-	-	-
	DUGM 2010	-	-	-	-
	SLGM 2006	-	1	-	1
16	DUGM 1988	-	-	-	-
17	DUGM 1988	4	-	-	4
<i>Phase 2 (SLGM)</i>					
working area	DUGM 2001	7	-	-	7
1	SLGM 2002	-	-	-	-
2	SLGM 2003	-	-	-	-
3	SLGM 2004	7	-	-	7
	SLGM 2005	1	-	-	1
	SLGM 2006	4	3	-	7
4	SLGM 2005	12	1	-	13
	SLGM 2006	767	52	22	841
	SLGM 2006	35	41	35	112
	metal detecting		1 (cu & pb)		

Site Area(s)	Site Code	fe	cu alloy	pb	Total
	SLGM 2007 metal detecting	1	-	-	1
5	SLGM 2006	1	1	-	2
	SLGM 2007	-	-	-	-
	SLGM 2009	-	-	-	-
	SLGM 2010	-	-	-	-
6	SLGM 2009	-	-	-	-
	SLGM 2010	-	-	-	-
enabling works	SLGM 2004	4	-	-	4
Total		1321	139	110	1570

All metalwork is quantified in the database by count and fragment count. This allows an approximate quantification of objects as well as fragments. A small number of unidentified fragments, many of them very small, are categorised as 'Unknown', and only quantified by fragment count. Nails, which are categorised separately from other Structural metalwork, are quantified by count and fragment count: complete and near complete nails and nail heads are counted to give a minimum number of nails; stem fragments are counted only in fragment count. The result of this methodology is that the minimum nail count gives a result that is generally low; by contrast the maximum number of nails based on a fragment count is generally too high. However used consistently the methodology can give an idea of quantities of nails present and their state of preservation, and allows comparison of assemblages.

Much of the material from all areas was recovered from topsoil layers. Where finds are from topsoil, they cannot be closely dated unless they are typologically distinct. There is material that is typologically distinctive, but there is also much material that not closely dateable. But it should be stressed that there is only limited material that can be dated definitely to post-Roman eras. One example is the small number of horseshoes and horseshoe nails that was recovered. For the purposes of this assessment all finds from topsoil have been considered unless certainly dating from after the Roman period. The metalwork from the two parts of the project has been separately assessed, although an overall view of both parts of the assemblages has been provided.

Provenance, distribution and assemblage composition

Phase 1 (DUGM 1988-DUGM 2001) (Tables C.2.2-6)

Almost all the metalwork from the 1988 fieldwork was recovered from Area 2. The metal assemblage from 1988 comprised 255 objects (308 fragments) and of these 251 objects (304 fragments) are from Area 2. The remaining 4 nails (4 fragments) are from Area 17.

The assemblage of metals from subsequent fieldwork is relatively small, with the largest part of the assemblage coming from Area 4. A small assemblage from Area 9 comprises mainly nails with a small number of other finds. The metalwork from Areas 6-8 comprises almost exclusively nails. Area 13 (DUGM 2001) produced just seven nails, and a shotgun cartridge.

Area 2 (DUGM 1988) (Tables C.2.2-3)

The assemblage from Area 2 includes 135 nails (167 fragments). The remaining finds include a possible mason's punch (SF 317), which is not closely dateable as it was recovered from topsoil. There are 13 horseshoes or fragments of horseshoes from Area 2 and also 4 horseshoe nails. All but one of the horseshoes was found in topsoil. The sole exception was from Area 2 context 71/1. The horseshoes are almost certainly not Roman and are not further considered. Although Manning (1985, 63, n 1; 1976, 31) has argued for the use of horseshoes in the Roman period, others are more sceptical (eg Clark, 1995, 78-81). It is telling that no securely stratified horseshoes of Roman date have been found.

A small number of household items was found including a fragment of knife blade which might be modern (SF 21; topsoil), and the bowls of two spoons (SF 53, topsoil; SF 98; Tr 1 context 2). There is also a lead rivet for repairing a ceramic vessel (SF 127; Tr 3 topsoil) and a bucket handle mount (SF 208, Tr 9 context 74/A/1). Part of a probable barb spring padlock key (SF 77, topsoil) and a latch lifter (SF 224, Tr 7 context 48/1) of the type found on Romano-British sites was also recovered. A modern padlock case (SF 90) from topsoil can be discounted.

Table C.2.2: Gill Mill 1988: Summary quantification of metal finds by Area and functional category

Area	Function											Total
	Tools	Transport	Personal	Household	Door	Security	Structural	Nails	Binding	Misc	Query	
2	1	17	15	7	1	3	2	135	2	50	18	251
17								4				4
Total	1	17	15	7	1	3	2	139	2	50	18	255

The most interesting part of the metal assemblage is the bracelets or armllets recovered from Area 2. Fragments of 10 bracelets were found and most were stratified (Table C.2.3). These included both bracelets formed from thin copper alloy strip, and cable pattern bracelets formed from twisted wire.

Table C.2.3: Bracelets from DUGM 1988 Area 2

	Description	Provenance
1	Cable bracelet fragment, with hooked end. Two wires twisted together.	Area 2, topsoil, sf 51
2	Narrow strip bracelet fragment, very thin strip decorated with a row of dots. Terminal decorated with three small bars has plain end with open half loop.	Area 2, topsoil, sf 122
3	Cable bracelet fragment, with hooked end. Formed from two wires twisted together.	Area 2, Tr 1 context 2, sf 85
4	Small bracelet (D: 44 x 40mm) formed from plain narrow lentoid section band, with hook and eyelet catch.	Area 2, Tr 5 context 81/1, sf 198
5	Narrow strip bracelet fragment. Strip varying from 3.5 mm to 2 mm in width. Traces of transverse lines partly hidden under corrosion products.	Area 2, Tr 7 context 51/A, sf 215
6	Narrow strip bracelet fragment, curved decorated narrow strip.	Area 2, Tr 9 context 66/1, sf 178
7	Cable bracelet fragment. Two wires twisted together.	Area 2, Tr 11 context 94/1, sf 247
8	Thin bracelet fragment of circular section, tapered terminal, transverse lines on outside of band.	Area 2, Tr 13 context 99/1, sf 257
9	Narrow strip bracelet formed from narrow slightly tapered band with ring and dot	Area 2, Tr 13 context 99/A/1, sf 265

	decoration. Tapers from 4 mm to 3.2 mm wide
10	Flat curved strip, slightly encrusted, probably from a bracelet, although no decoration is visible; however the x-ray suggest that the outer edge of the strip could be notched. Area 2, Tr 13 context 99/A/1, sf 272

Finally there are a number of pieces of uncertain identity, including 2 small pieces of copper alloy sheet decorated with rows of close set punched dots (SF 130, Tr 7 topsoil; SF 174, Tr 7 context 50/1) and numerous miscellaneous pieces including fragments of rod, bar, wire and sheet metal.

Overall the assemblage from Area 2 lacks a significant domestic or craft element. The only tool, the possible mason's punch, may well be recent in date; there are two spoon bowls and a possibly modern knife, and a barb spring padlock key and a latch lifter. The main finds of note would seem to be the copper alloy bracelet fragments (Table C.2.3). The composition of the metals assemblage is in part due to the limited scale of the archaeological interventions within the evaluation trenches. Much of the metalwork was recovered from topsoil. In assessing the finds from Area 2 the assemblage has been treated as if derived from surface collection.

Area 4 (DUGM 1989 & 1990) (Tables C.2.4-5)

The metalwork assemblage comprises 112 objects (180 fragments) (Table C.2.4) including 23 finds (23 fragments) recovered by metal detector (Table 5). The 1989 evaluation produced a single excavated metal find, and the 1990 fieldwork produced 88 metal objects (156 fragments).

Table C.2.4: Gill Mill 1989-2001 (DUGM 1989-DUGM 1999): Summary quantification of metal finds by Area and functional category

Area	Function										Total
	Tool	Transport	Measure	Personal	Household	Security	Structural	Nails	Misc	Query	
4	1	1	1	57		1	2	26	20	3	112
6 7 8				107				54	1		31
9				6	1			30	5	3	45
13	1										1
Total	2	1	1	170	1	1	2	109	26	6	320

Table C.2.5: Gill Mill: Areas 6, 7, 8 (DUGM 1995): Quantification of hobnails and nails from cremations

Trench	Context	Sample no	hobnails		nails	
			count	fragt count	count	fragt count
26	27	29	38	61	5	20
26	63	15			4	10
26	63	16	3	5	3	11
26	63	30	11	11	3	12
26	67	20			5	5
26	67	21	8	8		
26	67	22	5	5	0	1
26	67	23	4	4	2	2
26	67	29	28	30	3	7
26	75	11	9	9		
Total			106	133	25	68

The iron spade sheath (SF 3 context 2/7) from the evaluation is of Roman type (Type 1a, Manning 1985, 64 & fig. 10).

Metal detecting produced a range of finds including a linch pin with spatulate head, a biconical lead weight probably a steelyard weight, and a barb spring padlock bolt. It also produced a single nail.

Metal detecting also recovered 7 personal items, namely 2 fragments of bracelets, 2 studs, a possible pendant and 2 buckles. One of the bracelet fragments is plain with a flattened oval section and slightly expanded terminal, and the other is narrow and decorated with transverse lines. The studs comprise one decorated and the other a shallow concave cone-shape. One buckle cast in copper alloy is post-medieval in date; the second buckle is small with a plain rectangular iron frame and is not closely dateable.

Table C.2.6: Gill Mill: Area 4 (DUGM 1989 and 1990): Summary quantification of metal finds by context and functional category

Year	Context	Function									Total
		Tools	Transport	Measure	Personal	Security	Structural	Nails	Misc	Query	
1989	Metal detecting		1	1	7	1	2	1	7	3	23
	2/7	1									1
1989	Total	1	1	1	7	1	2	1	7	3	24
	3003							1			1
	3005/A/2							*			*
	3005/A/4							2			2
	3005/B/3								1		1
	3016							3			3
	3017/C								10		10
	3019				*						*

1990	3019/A				6						6
	3049/A/3				1						1
	3102				10						10
	3132								1		1
	3502								1		1
	3521				29			5			34
	3522										*
	3523				4			14			18
	67				*						*
1990	Total				50			25	13		88
	Total	1	1	1	57	1	2	26	20	3	112

* = fragments present

The range of finds recovered in the 1990 fieldwork is limited to nails (n = 25; n fragments = 69), and miscellaneous fragments (n = 13; n fragments = 13) - mostly lead – and personal items (n = 50). The latter comprise an almost complete cable twist bracelet (SF 525 context 3049/A/3), and 49 hobnails (n fragments = 72) (Table C.2.6).

Table C.2.7: Gill Mill: Area 4 (DUGM 1989 and 1990): quantification of hobnails in cremation burials

Context	SampleNo.	Count	Fragt count
67	20	0	12
3019	51	0	11
3019/A	50	6	6
3102		10	10
3521		26	26
3521		3	3
3523		4	4
Total		49	72

There are no obvious household items from the Area 4 assemblage, but there is a complete barb spring padlock bolt (metal detector find), which is probably of Roman date. Interestingly there is a comparatively small number of nails (n = 26; n fragments = 70).

Areas 6, 7 & 8 (DUGM 1995) (Tables C.2.4 and 5)

The finds from these areas are limited (see Table C.2.4) to 53 nails (129 fragments), 106 hobnails (133 fragments), a piece of melted lead waste, and a copper alloy spatula probe (sf 8, 1995 context 13/7). Many of the nails and all of the hobnails are from cremation burials in Trench 26 and were recovered through sieving of soil samples (Table C.2.7).

Area 9 (DUGM 1997) (Table C.2.4)

The metal finds from Area 9 number some 45 objects (63 fragments), including 30 nails (43 fragments) and 5 miscellaneous pieces (6 fragments). Other finds include a complete but bent copper alloy bracelet (SF 3, context 235), a length of looped bar, possibly a handle fragment (context 26), 3 hobnails, and 3 unidentified fragments.

Area 13 (DUGM 2001/SLGM 06) and Area 17 (DUGM 1988) (Tables C.2.2 and C.2.4)

The only metal finds from these two areas are nails and the base of a modern shotgun cartridge: Area 13 produced the shotgun cartridge, and Area 17 only four nails.

Phase 2 (SLGM 2004-SLGM 2007) (Tables C.2.8-12)

The overwhelming majority of metal finds from the SLGM 2004-2007 fieldwork come from SLGM Area 4 (Table C.2.8). The excavations produced 855 metal objects (1359 fragments) and systematic metal detecting another 112 objects (133 fragments).

Area 3 (SLGM 2004, 2005 and 2006) (Table C.2.8)

The metal assemblage from Area 3 comprises only 15 objects but these include a horseshoe (2004 context 5002) and 2 small horse or pony shoes (2004, context 4086). The latter context also produced a penknife. None of these objects is of Roman date. Four finds from this area were definitely of Roman date. These comprise a socketed knife (SF 7, context 4059), the handle of a copper alloy spoon (SF 5050, unstratified), part of a copper alloy bracelet (context 5000), and a belt fitting, possibly of military origin (context 5001). The belt fitting is particularly well-preserved with a dark green patina and no surface corrosion. Indeed the preservation of this object is so different from that of the other copper alloy from the site as to raise a question about its original provenance; was it really from the site? Other finds comprise part of hinge strap, possibly Roman (SF 5372, context 5128), 4 nails and 2 small blocks or lumps of iron.

Table C.2.8: Phase 2 (SLGM 2004-2007): Summary quantification of metal finds by Area and functional category

Area	Function														Total
	Arms	Tools	Transport	Measure	Religious/ Cult	Personal	Household	Door	Security	Structural	Nails	Binding	Misc	Query	
3			3			3	2	1			4		1	1	15
4		7	11		1	108	20	2	3	15	500	10	130	47	854
4 (metal detector finds)	1	4	5	7		14	8		1	1	6	3	45	18	113
5	1													1	2
Working area											7				7
Enabling works						2	1		1						4
Total	2	11	19	7	1	127	31	3	5	16	517	13	176	67	995

* = fragments present

Area 4 (SLGM 05, 2006 and 2006 metal detecting) (Table C.2.8)

The assemblage from SLGM Area 4 is by far the largest part of the overall metal assemblage from the two parts of the project. It comprises 854 metal objects from excavation and a further 113 objects from metal detecting. The excavations finds include 500 nails, while a further 6 nails came from metal detecting. Other large groups of material include miscellaneous pieces of rod, bar, strip and plate (n = 130) and objects of uncertain identification ('Query'; n = 47). Apart from nails, the Area 4 assemblage includes tools, a number of items relating to transport, and also personal and household items.

Tools (Table C.2.9)

A small number of tools were recovered including an awl, 2 punches, 3 chisels, a crow bar, drill bit fragment, a possible fragment of saw blade, smith's poker and a fragment of spade sheath. With the exception of the spade sheath, which is a good Roman form (Type 1d, Manning 1985, 44 & fig. 10), and possibly the awl and smith's poker, which are also likely to be Roman, the tools are not closely dateable on the basis of form alone. The dating of most of the tools will depend upon their contexts. Most are stratified, however, and a Roman date is likely in at least the great majority of cases (Table C.2.9).

Table C.2.9: SLGM Area 4: Tools by type and context

Context	awl	chisels	punch	? punch	crow bar	drill bit	saw blade	smith's poker	spade sheath	Total
5982			1							1
6014				1						1
6620	1									1
7344						1				1
7701		1								1
9751		1								1
9885							1			1
M D		1			1			1	1	4
Total	1	3	1	1	1	1	1	1	1	11

Transport (Table C.2.10)

For the most part items relating to transport can be more confidently dated. Eight linch pins of Roman type were recovered from Area 4. This number includes 4 found though metal detecting. The excavated linch pins comprise an example with a crescentic head and no loop or lug (Type 1a, see Manning 1985, 74 & fig. 20; see also Manning 1976, 32-34 & fig. 9) (SF 5931, context 10620), a linch pin with a simple spatulate head (Type 2a), and 2 examples with spatulate heads and rolled over loops (Type 2b). The metal detector finds comprise 1 large linch pin with crescentic head and large rectangular lug (Type 1c), and 3 spatulate headed linch pins with loops (Type 2b). The number of linch pins is noteworthy. A search of published rural settlement sites in the Upper Thames Valley has revealed that most sites have produced few if any linch pins. The two sites with the most published examples are Claydon Pike with 4 examples (Cool 2007, section 3.4.1) and Shakenoak with 4 possible examples (Brodrigg et al. 2005, 66-7, fig. I.35, no. 40; 362-3, fig. IV.56, nos 364-6) (information from Paul Booth).

Table C.2.10: SLGM Area 4: Items relating to transport by type and context

Context	linch pin	nave band	snaffle bit	hipposandal	horseshoe nail	Total
5630	1					1
6008	1	1		2		4
6133			1			1
6517			1			1
7324					2	2
10032	1					1
10620	1					1
M D	4					4
Total	8	1	2	2	2	15

Other transport items, all from excavation, include a possible nave band, and fragments of two simple snaffle bits with jointed mouth bars. There are two fragments which may be from 2 separate hipposandals. There are also 2 horseshoe nails which are not Roman.

Personal (Table C.2.11)

The personal items are quite numerous and most are from the excavations. Amongst them are a number of hobnails, all from excavation. Most of the hobnails were found in small groups in a limited number of contexts. They were the single largest category of personal object by number. Even discounting the hobnails the number of personal items (n = 159) is notable.

Table C.2.11: SLGM Area 4: Personal items by type and context

Context	amulets	bracelets	brooches	finger rings	hairpins	hobnails	shoe clamp	pins	buckles	studs	Total
4632		1									1
5301			1								1
5800				1							1
5802								1			1
5915						1					1
5983						1					1
6081			1								1
6135						1	1				2
6205						1					1
6224		1									1
6378						6					6
6492		1									1
6777						1					1
6973		1									1
6987						14					14
7116						14					14

Context	amulets	bracelets	brooches	finger rings	hairpins	hobnails	shoe clamp	pins	buckles	studs	Total
7650					1						1
7997		1									1
8492						1					1
8561		1									1
8645						19					19
9015		1									1
9400			1								1
9865								1			1
10142								1			1
10143		1				8					9
10149						3					3
10155					1						1
10298		1									1
10425						14					14
10450			1								1
10647				1							1
10713		1									1
10841						1					1
10884		1									1
M D	2	1	4	3					3	1	14
Total	2	12	8	5	2	85	1	3	3	1	244

After hobnails the largest categories of objects are bracelets (n = 12), brooches (n = 8) and finger rings (n = 5). The bracelets are all of late Roman type and include 4 cable pattern brooches or brooch fragments formed from wires twisted together (SF 5169, context 6492; SF 5261, context 6973; SF 5846, context 10143; SF 5863, context 10298), 2 thin strip brooches with punched decoration (SF 5958, context 10884; SF 5968, context 10713), 2 plain strip bracelets (SF 5121, context 6224; SF 5689, context 8561), 2 wire brooches with sliding adjustment (SF 24, context 4632; SF 5725, context 9015), a bracelet of thin curved strip, undecorated (SF 5816, context 7997), and a bracelet or armlet of solid oval section (metal detector find).

The brooches include a fragment of a Hod Hill brooch (SF 5026, context 5301), a Trumpet brooch (metal detector find 10480), 2 Dolphin brooches (metal detector finds 10230 & 10542), a disc brooch with enamel decoration (SF 5746, context 9400) and a small disc brooch (metal detector find 10006) as well as fragments of a brooch (SF 5, context 6081) and a brooch pin and spring (SF 5151, context 10450). The relatively small number of brooches reflects that fact that the site has little evidence for occupation before the 2nd century.

There are 5 finger rings or possible finger rings. One possible ring is iron and heavily encrusted (context 5800) and its identity is not certain. There are 3 plain copper alloy rings (SF 5439, context 10647; and 2 metal detector finds), and a ring with a decorated band and a simple domed oval intaglio probably of glass (metal detector find 10101). The latter is of particular

interest because the decoration of the intaglio which consisted of a simple V-section groove cut along the length of the intaglio. This same motif is found on 2 hexagonal copper alloy mounts (metal detector finds 10041 and 10300). The mounts each have two lugs or rivets on the back. In the centre of each of the slightly curved plates is a raised oval dome with a V-section slot. These are 'vulva' amulets (cf examples from Nijmegen; Zadocks-Josephus Jitta et al. 1973, 50-51, nos 72-76, especially nos 74-75). The presence of two such amulets together with a ring decorated with a similar motif is of more than passing interest. The amulets and the ring perhaps should be categorised as religious or cult objects rather than personal items.

The final personal items are two hair pins, one with a polygonal head (SF 5839, context 10155) and the other a fine example of a hair pin with a glass head (SF 5497, context 7650).

Household objects (Table C.2.12)

There are a few household objects (n = 28). These include 12 knives or knife blades, some of which are not closely dateable because insufficient of the knife survives. There 2 are socketed knives with straight backed deep blades with curved edges (SF 5208, context 6637; SF 5825, context 10031), and a third blade fragment probably from a similar knife (SF 5082, context 5888), all of which are probably of Roman date. There are 2 knives of late Roman form (SF 5107, context 6205; metal detector find 10646). There is one fragmentary knife of post-medieval date (SF 5873, context 10339), and 2 other blade fragments which may be modern (SF 5883, context 10354; metal detector find 10659). The remaining fragments cannot be dated with confidence on form alone.

There are also 6 spoons or fragments of spoons. These include 1 almost complete spoon (metal detector find 10384) and 3 distinctive fig-shaped spoon bowls of Roman date (SF 5906, context 10142; SF 5009, context 5264; metal detector find 10492). One spoon bowl, of pewter, may be of post-medieval date (metal detector find 10354). There are also 3 pewter vessels. One is a complete small dish (context 6008); the others are a fragment of a small plate (metal detector find 16) and the rim from a necked vessel (SF 5754, context 9415).

Table C.2.12: SLGM Area 4: Household items by type and context

Context	knife blades	spoons	pewter vessels	bucket handle mounts	? handle	drop handle	handle mount	? socket	Total
5264		1							1
5507	1								1
5888	1								1
6008			1						1
6205	1								1
6523				1					1
6637	1								1
6848								1	1
7132	1								1
7925				1					1
8417					1				1
9016		1							1
9170				1					1

9415			1						1
9889	1								1
10142		1							1
10149	1								1
10339	1								1
10354	1								1
10851	1								1
M D	2	3	1			1	1		8
Total	12	6	3	3	1	1	1	1	30

Other household finds include 3 bucket handle mounts (context 6523; SF 5600, context 7925; SF 5744, context 9170), a possible iron drop handle, now heavily encrusted (metal detector find 110) and circular cast copper alloy mount and split pin possibly a handle mount (metal detector find 10325). The date of the latter is uncertain.

Religious or cult objects

Only one object has been assigned to this category although as noted above there are 2 amulets and a finger ring all with vulva motifs which might be assigned to this category. The single object in this category is a rather poorly preserved dodecahedron apparently made of lead (SF 5112, context 6279). This is not the only dodecahedron from Gill Mill, for an almost complete example in copper alloy is known (Booth et al. 2007, 285-86 & fig. 6.3); this was a metal-detector find apparently made somewhere within the Phase 1 quarry, the object being shown to OA in 1998 but retained by the finder). A relatively large number of dodecahedrons are known (Greiner 1995; Nouwen 1993), including about 50 examples from Britain, but their function has remained controversial. Recently it has been suggested that they may have been used to measure the angle of the sun and thus to establish an agricultural calendar (Wagemans 1997; see also van Driel-Murray 2002).

Other finds

The other finds from Area 4 are limited in number but include a possible door nail (context 7701) and hinge (SF 5171, context 6426), 2 latch lifters (SF 25, context 4688; SF 5683, context 8417), a barbed spring padlock key (SF 5828, context 10040) and a possible bolt plate for a door (metal detector find 10558). There are also several pieces of structural ironwork as well as 506 nails.

Area 5 (SLGM 2006) (Table C.2.8)

There are two objects only from Area 5, a large slim leaf-shaped spearhead of good Roman form (SF 12000, context 12026) and a length of twisted copper alloy wire which may have been part of a cable bracelet (SF 13000, context 13195).

Working Area (DUGM 2001) (Table C.2.8)

Fieldwork in this area produced just 7 nails (10 fragments) (contexts 217, 223, 235 & 237).

Enabling works (SLGM 2004) (Table C.2.8)

The metal finds from the enabling works comprise 2 nail stem fragments (context 4230), 2 hobnails (context 4233), part of a whittle tang knife with a plain wooden handle (SF 9, context 4233) and a fragmentary latch lifter (context 4269).

Assessment and further work

Phase 1 (DUGM 1988-DUGM 2001)

The metalwork assemblage is quite substantial (n = 444) with concentrations in Area 4 (n = 112) and in particular Area 2 (n = 251).

Most interesting of the finds from Area 2 are the 10 bracelet fragments, which should be published and illustrated.

Area 4 produced a smaller metalwork assemblage. Notable finds were a spade sheath and a spatulate headed linch pin, both Roman forms, two bracelets and other personal items, a small biconical lead weight from a balance, and a barbed spring padlock bolt.

A bracelet from Area 9 and spatula probe from Areas 6, 7, 8 should also be published and illustrated. The hobnails and nails from DUGM 1995 Trench 26 cremations need to be noted although detailed publication is not required.

Although some of the fieldwork was limited in scope, and some of the material is unstratified, it does nonetheless give a view of the material culture of this part of the site and as such is worthy of publication, both generally as a means of characterising the site and by selected illustration for more interesting and significant finds.

Phase 2 (SLGM 2004-SLGM 2007)

The metalwork assemblage from Phase 2 of the site is much larger than that from the Phase 1 work. In part this reflects the greater extent of the excavation works, but it also does seem to reflect a greater density of occupation.

Once again most of the finds are concentrated in one area, in this case in Area 4. The total number of metal finds from the Phase 2 works is 995, of which 967 are from Area 4, with only 28 metal finds from other parts of the site. Metal detector finds account for 113 of the finds from Area 4. Fortunately the metal detector finds were plotted and their distribution can therefore be compared to the known archaeological features and to the distribution of excavated finds.

The finds from Area 4 include several tools (Table C.2.9), a number of items relating to transport (Table C.2.10) including pieces from 2 snaffle bits, a possible nave band, 2 fragments possibly from hipposandals and 8 linch pins of Roman type. Also relevant in the context of transport-related finds is the fragment of a cart wheel in oak amongst the waterlogged wood from the site (Booth *et al.* 2007, 313 & fig. 6.18), although this is from Phase 1 Area 9.

The area also produced numerous personal items (Table C.2.11) most notably bracelets, amulets and finger rings as well as numerous hobnails. The presence of the two vulva amulets together with a finger ring with a similar motif amongst the metal detector finds is particularly interesting.

Another interesting find from Area 4 is a poorly preserved dodecahedron in lead. As noted this is not the only example from the site (cf. Booth *et al.* 2007, 285-286 & fig. 6.3). These finds hint at something a little different happening at Gill Mill and suggest that this is not a straightforward nucleated rural site. This hint is further supported by the discovery of a rare bronze bottle or

flask (perhaps a container for bath oils), in the form of a booted foot, in the locality, apparently at c SP 3800 0665 (Coombe 2006).

The finds assemblage from Area 4 is distinctive with its numerous personal items and strong representation of transport. The finds from Area 4 should be published as an assemblage to help to characterise the site and its occupation. Selected finds, particularly personal items, and items relating to transport should be published and illustrated.

Finds from areas other than Area 4 include a small number of objects from Area 3 including a horseshoe and penknife, none of which require publication. From the enabling works (SLGM 2004) there is a latch lifter and a whittle tang knife with plain wooden handle which could be published as part of the overall assemblage.

C.3 Glass

Ian Scott

Methodology

The glass assemblages from Gill Mill are not large but comprise almost all Romano-British glass, with very little later material. The assemblage has been quantified by sherd count and sherds provisionally identified and recorded onto a database.

Composition of the assemblage

The glass assemblage comprises 180 sherds (Table C.3.1). Very small quantities of glass were recovered from fieldwork in 1995 (n = 1), 1998 (n = 1), 2005 (n = 5), 2007 (n = 1) and 2008 (n = 1). More glass was recovered in 1988 (n = 28), 1990 (n = 17) and 2006 (n = 126).

Table C.3.1: Glass: Summary quantification of glass by Site area and Object date (sherd count)

Code	Area	Spot date			Total	
		RB	Late RB	Post-med/ modern		Undiagnostic
DUGM	1			1		1
	2		23		2	25
	4	2	2	1	9	14
	9			1		1
	6 7 8	1				1
			2		3	5
	<i>Total</i>		3	27	3	14	47
SLGM	4	71	23	2	35	131
	5			1		1
	13			1		1
	<i>Total</i>	71	23	4	35	133
Total		74	50	7	49	180

DUGM (Table C.3.2)

Area 1 (DUGM 1988)

A single sherd comprising the neck of a post-medieval pharmaceutical bottle (SF 56, Tr 3 topsoil) was the only glass recovered from Area 1.

Table C.3.2: DUGM 1988-1998: Glass: Summary quantification by Site area, Context and Object date (sherd count)

Area	Year	Context	Spot date				Total	
			RB	LRB	Post-med/ modern	uncertain		
1	1988	topsoil			1		1	
2	1988	/3		1			1	
		49/1		2			2	
		51/1		4			4	
		66/1		1		1	2	
		72/1	1				1	
		73/1		2			2	
		74/1		5			5	
		74/A/1		2			2	
		75/1		1			1	
		8/1		2			2	
		94/1		1			1	
		99/1					1	1
		topsoil		3				3
<i>Total</i>			1	24	1	2	28	
4	1990	3005/A/ 2				1	1	
		3005/A/ 4				1	1	
		3005/B/ 2	1				1	
		3005/B/ 4				1	1	
		3013				2	2	
		3015		2		2	4	
		3019				1	1	
		3047/B/ 6				1	1	
		3051/A/ 2				1	1	
		3401	1		1		2	
		3066/A/ 2		1			1	
		Topsoil					1	1
<i>Total</i>			2	2	1	12	17	
6 7 8	1995	17/8	1				1	
9	1998	340			1		1	
Total			4	26	3	14	47	

Area 2 (DUGM 1988) (Table C.3.2)

The glass recovered from Area 2 comprises 28 sherds, 24 of which are predominantly thin-walled sherds of colourless or near colourless glass with fine bubbles in the metal and some black specks. This glass dates to the 4th century. The dating is confirmed by the presence of the cracked-off rim of a conical beaker (No. 2 below; see Price and Cottam 1998, 121-23 and fig. 50) and a large sherd from a decorated shallow convex bowl of 4th-century date (No.4; see Price and Cottam 1998, 124-27 & figs 51-2). There is also a sherd from a vessel with optic blown ribs (No. 5), possibly from a trumpet mouthed biconical jug (see Price and Cottam 1998, 163-65 & fig. 72; cf Cool and Price 1995, 147 & fig. 8.1, no. 1160). Other featured sherds include a rim sherd from a probable beaker (No. 1), and a rim sherd from beaker or small bowl (No.3).

Apart from the late Roman glass there is a melted sherd of colourless glass (SF 181, Tr 9, context 66/1), and a vessel base with a foot ring in colourless glass (SF 259, Tr 13, context 99/1). The latter is not closely dated within the Roman period.

Featured sherds

- 1 **Beaker.** Fired rounded out turned rim. Small ridge perhaps created by grinding on neck. Tiny bubbles in metal. Colourless/very pale green. LRB. 1 sherd. **DUGM 1988, Area 2**, Tr 13, context /3, SF 260. Illustrate
- 2 **Conical beaker.** Cracked-off rim of a thin walled conical beaker. Later 2nd C to end 4th C. 4 small thin walled body sherds could be from same vessel. All have tiny bubbles in metal. Colourless/very pale green. LRB. 1 sherd. **DUGM 1988, Area 2**, Tr 9, context 74/1, SF 183. Illustrate
- 3 **Beaker or small bowl.** Out turned fire rounded rim. Bubbles in the metal. Colourless/very pale green. LRB. 1 sherd. **DUGM 1988, Area 2**, Tr 9, context 72/1, SF 216. Illustrate
- 4 **Shallow convex bowl** with cracked off rim. There is a patterned panel with small dots on part of the wall. Fine bubbles in meal. 4th C. Colourless/very pale green. LRB. 1 sherd. **DUGM 1988, Area 2**, Tr 7, context 49/1, SF 299. Illustrate
- 5 **Body sherd** with diagonal optic blown ribs probably from a funnel mouthed jug. 4th C. Colourless/very pale green. LRB. 1 sherd. **DUGM 1988, Area 2**, context 51/1, SF 325. Illustrate

Area 4 (DUGM 1990) (Table C.3.2)

There are 17 sherds from Area 4, including 2 small sherds of thin glass with fine bubbles (SFs 349-350, context 3041), and 2 sherds of late Roman Roman glass, one a sherd from a vessel base with tubular foot ring (No. 6 below) and a tiny bead of blue glass (No. 7). There is also a sherd from the base of a post-medieval or modern wine bottle (SF 580, context 3401).

Most of the sherds of glass (n = 14) from Area 4 are not readily dated. These include pieces of possible window glass (n = 8), and pieces of melted glass (n = 2). The remaining 4 sherds are small and undiagnostic.

- 6 Sherd with **tubular base ring**. Blue green. RB. 1 sherd. **DUGM 1990, Area 4**, context 3401, SF 580.
- 7 **Bead.** Tiny bun-shaped annular bead. Blue. RB. 1 sherd. **DUGM 1990, Area 4**, context 3005/B/2, SF 514. Illustrate

Areas 6-8 (DUGM 1995)

The single sherd of glass from Areas 6-8 is an undiagnostic body sherd of blue green glass (context 17/8) which can be dated to the Roman period.

Area 9 (DUGM 1998)

The only glass from Area 9 is a heavily weathered thick sherd of green glass of post-medieval or modern date (context 340).

SLGM 2005-2008 (Table C.3.3)**Area 4**

The glass assemblage from Area 4 comprises 126 sherds, largely dated to the Roman period. There are 71 sherds, including 7 beads that can be dated to the Roman period generally, and a further 23 sherds which can be dated to the late Roman period. The latter include a sherd from a bowl with a cracked-off rim (No. 8) and a rim sherd from a wide convex bowl (No.9). The latter has a cracked-off rim and wheel cut decoration on the body. There are two body sherds with optic blown ribs probably from trumpet-mouthed jugs (Nos 11-12), and the neck of a flask with a globular body (No. 14). Other Roman sherds include a number of fragments from bottles and bottle handles (Nos. 15-22), and 7 beads (Nos 25-30), as well as a number of small sherds undiagnostic to form.

Table C.3.3 SLGM 2005-2008: summary quantification of glass by site area, context and object date (sherd count)

Area	Year	Context	Spot dates				Totals
			RB	LRB	post med/ modern	uncertain	
4	2005	4435				1	1
		4440	1				1
		4697				1	1
		4743	1				1
		4800	1				1
4	2005/6	5203		1			1
		5517		1	1		2
		5523		1			1
		5661	1				1
		5838	1				1
		5929	1				1
		6008		2			2
		6144	1				1
		6162	5			2	7
		6279	3			1	4
		6333				1	1
		6334	1				1
		6335				2	2
		6519		1			1
		6552				1	1
		6834				2	2
		6956	1				1
		7094	1				1
		7118		1			1
		7258		1			1
7292		2			2		

Area	Year	Context	Spot dates				Totals
			RB	LRB	post med/ modern	uncertain	
		7324	3	6			9
		7327	1				1
		7358	1				1
		7389	2				2
		7390	1				1
		7397			1		1
		7403	1				1
		7416	1				1
		7506				1	1
		7539	1				1
		7595	1				1
		7650		1			1
		7696	2				2
		7728	1				1
		7952	2				2
		7985	1				1
		8102	1			2	3
		8142	1				1
		8273	1				1
		8360	1				1
		8419	1				1
		8437	1				1
		8438	7				7
		8604				3	3
		8727				1	1
		8728	1				1
		8811				1	1
		9017	1				1
		9042				1	1
		9318	1				1
		9388		1			1
		9470	1				1
		9471	3				3
		9636	1				1
		9733	1				1
	2006	10126	1				1
		10142		1			1
		10143				1	1
		10149	1				1
		10157	1	1		1	3
		10271	1				1

Area	Year	Context	Spot dates				Totals
			RB	LRB	post med/ modern	uncertain	
		10297	2			12	14
		10314	3				3
		10328	1				1
		10339				1	1
		10343	1				1
		10354		1			1
		10457		2			2
		10536	2				2
			71	23	2	35	131
5	2008	12883			1		1
13	2007	11010			1		1
Total			71	23	4	35	133

Finds certainly post-dating the Roman period comprise the kick or push up from a small cylindrical vessel, possibly a pharmaceutical bottle, of post-medieval glass (context 5517) and a piece of more recent window glass (context 7397). There are a number of sherds of uncertain date (n = 33), including 3 pieces of window glass, one of which has traces of painted lines. None of the window glass appears to be Roman.

Featured sherds

8 **Bowl.** Rim sherd from bowl with cracked off rim. Also body sherd of similar thickness. Both sherds with fine bubbles. Colourless. LRB. 2 sherds. **SLGM 2006, Area 4**, context 7324. Illustrate.

9 **Wide convex bowl** with cracked off rim. It has wheel cut decoration on the body. 4th C. Colourless with hint of green. LRB. 1 sherd. **SLGM 2006, Area 4**, context 5203, SF 5022. Illustrate.

10 **Jar?** Fire rounded out turned rim, possibly from jar. Blue green. RB. 1 sherd. **SLGM 2006, Area 4**, context 10149, SF 5845. Illustrate.

11 **Flask or jug.** Body sherd with diagonal optic blown ribs. Probably from biconical funnel mouthed jug. 4th C. Colourless with a hint of green. LRB. 1 sherd. **SLGM 2006, Area 4**, context 5517, SF 5040. Illustrate.

12 **Flask or jug.** Thin walled sherd with optic blown ribs. Fine elongated bubbles aligned with ribs. Probably from biconical funnel mouthed jug. 4th C. Very pale green. LRB. 1 sherd. **SLGM 2006, Area 4**, context 7650, SF 5501. Illustrate.

13 **Flask or bottle.** Sherd from flask or bottle with folded horizontal rim. Blue green. RB. 1 sherd. **SLGM 2006, Area 4**, context 7985, SF 5628. Illustrate.

14 **Flask.** Neck with constriction probably from globular flask with cracked-off rim. Later 3rd C-late 4th C. Blue green. LRB. 1 sherd. **SLGM 2006, Area 4**, context 5523, SF 5065. Illustrate.

15 **Bottle.** Neck sherd from square bottle. Blue. RB. 1 sherd. **SLGM 2006, Area 4**, context 6162, SF 5125. Illustrate.

16 **Bottle.** Neck of bottle or flask with strip handle. Slight evidence for melting. Blue green. RB. 1 sherd. **SLGM 2006, Area 4**, context 10314, SF 5895. Illustrate.

17 **Square bottle.** Base and body sherds, with concentric rings on base. Blue. RB. 1 sherd. **SLGM 2006, Area 4**, context 6279, sf 5122, sf 5123, SF 5124. Illustrate.

18 **Base of bottle.** Sherd with moulded concentric circles. Pale blue green. RB. 1 sherd. **SLGM 2006, Area 4**, context 8273. Illustrate.

19 **Base of square bottle.** Sherd with moulded concentric circles. Pale green. RB. 1 sherd. **SLGM 2006, Area 4**, context 9636, SF 5783. Illustrate.

- 20 **Bottle handle.** Reeded strip handle fragment from bottle or flask. Pale blue green. RB. 1 sherd. **SLGM 2006, Area 4**, context 6956, SF 5258. Illustrate.
- 21 **Bottle handle.** Fragment of reeded strip handle from bottle. Pale blue green. RB. 1 sherd. **SLGM 2006, Area 4**, context 7389, SF 5445. Illustrate.
- 22 **Bottle handle.** Fragment of reeded strip handle from bottle. Blue. RB. 1 sherd. **SLGM 2006, Area 4**, context 8360, SF 5670. Illustrate.
- 23 **Rod handle** of sub triangular section, from jug or flask. Pale green. RB. 1 sherd. **SLGM 2006, Area 4**, context 7539, SF 5468. Illustrate.
- 24 **Vessel base** with applied foot ring. Blue green. RB. 1 sherd. **SLGM 2006, Area 4**, context 7094, SF 5319. Illustrate.
- 25 **Tubular bead.** Dark blue green. RB. 1 sherd. **SLGM 2006, Area 4**, context 7324. Illustrate.
- 26 **Small annular bead.** 50% extant. Blue. RB. 1 sherd. **SLGM 2006, Area 4**, context 9017, SF 5742. Illustrate.
- 27 **Small annular bead.** Complete. Green. RB. 1 sherd. **SLGM 2006, Area 4**, context 9470, sample 5127. Illustrate.
- 28 **Two small annular beads**, complete. Green. RB. 2 sherds. **SLGM 2006, Area 4**, context 9471, sample 5126. Illustrate.
- 29 **Small tubular bead**, slightly tapered. Blue. RB. 1 sherd. **SLGM 2006, Area 4**, context 9471, sample 5126. Illustrate.
- 30 **Small annular bead**, complete. Blue. RB. 1 sherd. **SLGM 2006, Area 4**, context 10157, SF 5838. Illustrate.

Assessment and further work

DUGM

The glass assemblage from DUGM 1988 Area 2 is small but has group value because it is a stratified largely late Roman assemblage. It has more restricted potential for analysis in that it is composed largely of small body sherds. Nonetheless it is worth publishing the assemblage as a whole as a late Roman assemblage as part of the material culture of an excavated landscape/settlement, but only a limited number of sherds/vessels require detailed publication and illustration. The spatial distribution of the late Roman sherds should be plotted.

The small assemblage from DUGM 1990 Area 4 has limited group value. The small bead (SF 514) from context 3005/B/2 should be published and illustrated.

SLGM

The glass assemblage from SLGM Area 4 is relatively substantial. Again it has group value but is comprised mainly of small body sherds. A proportion of the assemblage is clearly of late Roman date, with a substantial number of sherds at present dateable only to the Roman period. Further work on the assemblage might allow a refinement of the dating of some of these sherds. The assemblage includes a more limited quantity of post-medieval or modern sherds, as well as a number of sherds that cannot be closely dated. The latter are undiagnostic and no further work is required.

Again the assemblage is worth publishing as a group, as a significant part of the material culture from the settlement in Area 4. Its spatial distribution should be plotted in relation to the known structural features. A number of sherds/vessels should be illustrated and catalogued.

C.4 Worked bone

Ian Scott

Introduction

The small assemblage of worked bone comprises 31 bone objects (37 fragments). Eleven objects were found in DUGM 1988 Area 2 and DUGM 1990 Area 4, the remaining pieces in SLGM Area 4 (Tables C.4.1-2). The small assemblage has been fully recorded as part of the assessment. The material derives from a variety of contexts, mainly pits and ditches. None of it is from more closely defined context types such as graves.

Assemblage composition

DUGM Area 2 and Area 4

The assemblage comprises 1 piece of worked bone from DUGM 1988 Area 2 and 9 pieces from DUGM 1990 Area 4. The single piece from Area 2 is a fragment of long bone with cut marks. It might be bone working waste, or butchery or food waste.

The 9 pieces of worked bone from Area 4 include 7 bone points made from small bones cut and sharpened to a point, there is also a circular counter or possible inlay (SF 543, context 3017/C), and a possible rough out for a hair pin (SF 576, context 3005/C/4).

Table C.4.1: Worked bone from DUGM 1988 Area 2 and 1990 Area 4

	<i>Identification</i>	<i>Description</i>	<i>Year</i>	<i>Provenance</i>
1	Bone fragment	long bone fragment with cut marks. Possibly bone working waste.	1988	Area 2, Tr 1, context 9, SF 295
2	Possible rough out	possibly top of a rough out for a hairpin.	1990	Area 4, context 3005/C/4, SF 576
3	Counter	circular counter or inlay/appliqué with central hole contained by concentric groove.	1990	Area 4, context 3017/C, SF 543
4	Bone points	6 x bone points formed from small long bones: L: 117 mm (x 2); 116 mm; 108 mm; 106 mm; 88 mm	1990	Area 4, context 3531, SF 573
5	Bone point	bone point formed from small long bone.	1990	Area 4, context 3066/A/2, SF 572

SLGM Area 4

The worked bone comprises 21 objects (27 fragments) (Table C.4.2). These include 2 pieces of bone with cut marks (SF 5422, context 7258; SF 5542, context 7696), which might be bone working debris but might just be food waste. The latter piece of cut bone was found in the same context as a rectangular piece of inlay (SF 5573) and a bone counter (SF 5559). There are also 3 bone points similar to those from DUGM Area 4 (see Table C.4.1).

There are 5 pieces of decorated bone. These comprise the rectangular inlay (SF 5573, context 7696) and bone disc or counter (SF 5559, context 7696) mentioned above, a roughly rectangular fragment of bone decorated with S curls and diagonal lines (SF 5543, context 7701) from the same pit (7695), a square piece of bone with ring dot decoration surrounded by two

concentric circles (SF 2, context 6015), and a fragment of a bone handle (SF 5865, context 10142).

Table C.4.2: Worked bone from SLGM Area 4

	<i>Identification</i>	<i>Comments</i>	<i>Provenance</i>
1	Cut bone	cut bone, somewhat worn, possibly bone working waste	Area 4, context 7258, SF 5422
2	Cut bone	cut bone, possibly bone working waste, possibly just from butchery.	Area 4, context 7696, SF 5542
3	Bone point	bone point roughly made from a fragment of large long bone	Area 4, context 5778
4	Bone point	bone point made from small long bone.	Area 4, context 7999, SF 5620
5	Bone point	bone point made from small long bone	Area 4, context 7999, SF 5621
6	Decorated bone	square cut fragment of thick bone (c 8 mm), with central ring and dot surrounded by large concentric circles. Unfinished appliqué/inlay?	Area 4, context 6015, SF 2
7	Inlay	rectangular bone inlay with pattern of ring and dot motifs	Area 4, context 7696, SF 5573
8	Decorated bone	rectangular piece of bone, with flattened surface decorated with S-curves and diagonal lines. Possibly not Roman?	Area 4, context 7701, SF 5543
9	Counter	disc or circular counter of bone, with central depression on one face.	Area 4, context 7696, SF 5559
10	Handle	fragment of bone handle, decorated at the end with 5 parallel cut grooves. Lathe cut	Area 4, context 10142, SF 5865
11	Bracelet	bone bracelet with narrow hoop of plano-convex section.	Area 4, context 10143, SF 4848
12	Hairpin	fragment with simple ovoid head and swelling on stem	Area 4, context 7701, SF 5577
13	Hairpin	hairpin with simple near spherical head and mid stem swelling. Stem D: 3/3.5 mm. (2 x fragments)	Area 4, context 7992, SF 5612
14	Hairpin	hairpin with simple near spherical head and slight mid stem swelling. Stem D: 3 mm	Area 4, context 9845, SF 5817
15	Hairpin	fragment with elongated simple near spherical head, with stem swelling. Lower portion of stem missing	Area 4, context 10480, SF 5924
16	Hairpin	hairpin, lacking head, complete stem survives (3 x fragments)	Area 4, context 10143, SF 5847
17	Hairpin	stem fragment, polished	Area 4, context 5755, SF 5055
18	Hairpin	stem fragment (2 x fragments) with slight swelling, polished	Area 4, context 5784, SF 5070
19	Hairpin	stem and tip fragments (2 x fragments), polished. D: 4.5 mm	Area 4, context 6341
20	Hairpin	stem fragment, polished	Area 4, context 10318
21	Hairpin	tapering point or possible hairpin, polished stem. (2 x fragments)	Area 4, context 8308, SF 5654

The remaining worked bone comprises personal items. There is a fragment of a narrow bone bracelet or bangle (SF 4848, context 10143), and 9 hairpins or fragments of hairpins (Table C.4.2). Where the heads of the pins survive they are plain ovoids (Type 3, Crummy 1979, 157

and fig. 1). At Colchester this type at Colchester occurs mainly in late 3rd and 4th century contexts, with a few found in late 2nd and early 3rd century contexts. There is a further tapering bone pin with a polished stem and point, which might have served as a hair pin (SF 5654, context 8308).

Assessment and further work

DUGM

The single piece of cut bone from DUGM 1988 Area 2 does not require publication or illustration as an artefact.

The small assemblage from DUGM 1990 Area 4, comprising as it does a number of similar bone points, a counter and possible rough out for a hairpin, has some limited group value and should be published and selected objects illustrated.

SLGM

The small assemblage from SLGM Area 4 has group value, particularly when considered with the fact that from the same site area there are shale bracelets, and a number of copper alloy personal items. The worked bone, the shale and jet and the metal finds are all parts of the overall finds assemblage and together provide a good indication of the material culture associated with the Roman occupation. The worked bone should be published and illustrated in conjunction with the other small finds.

For both assemblages the material will be examined by the animal bone specialist as well as by the finds specialist.

C.5 Shale and jet

Ian Scott

Introduction

The small assemblage of shale and jet comprises 15 fragments of shale and 1 piece of jet. One object was found in DUGM Area 2, the remaining pieces in SLGM 4 (Tables C.5.1-2). The small assemblage has been fully recorded as part of the assessment. On the basis of form, there is no doubt that all the material is Roman in date

Assemblage composition

DUGM Area 2

The single piece of shale from DUGM Area 2 comprises a fragment of a lathe turned bracelet or armlet. Similar bracelets were recovered from SLGM Area 4.

Table C.5.1: Shale from DUGM Area 2

	<i>Identification</i>	<i>Description</i>	<i>Material</i>	<i>Provenance</i>
13	Bracelet	fragment of shale bracelet of oval section, plain. Evidence for lathe turning on inside face.	shale	Area 2, context 49/1, SF 371

SLGM Area 4

The shale includes 2 vessel rim sherds, 1 very small, of which the larger example (SF 5046, context 5673) is decorated and clearly lathe turned. In addition to the rim sherds there are 3 body sherds from a shale vessel. None of these body fragments has any distinctive features, but the large sherd at least is probably from a bowl.

The majority of the shale comprises fragments of bracelets or armlets. All appear to be plain and are lathe turned. One small plain bangle or ring (SF 5929, context 10579), which might have been for a child, was also found.

The single jet object is the highly polished tip of a hairpin (SF 5576, context 7701).

Table C.5.2: Shale from SLGM Area 4

	<i>Identification</i>	<i>Description</i>	<i>Material</i>	<i>Provenance</i>
1	Vessel	rim sherd from shale vessel. Lathe turned	shale	Area 4, context 5673, SF 5046
2	Vessel	small rim fragment from probable vessel.	shale	Area 4, context 10439,
3	Vessel	3 x body sherds, 1 x large 60 mm x 28 mm, Th: 4.5/5 mm; 2 x small body sherds, L: 30 mm & 27 mm, Th: 4 mm	shale	Area 4, context 10439, SF 5926
4	Hairpin	tip of jet hairpin	jet	Area 4, context 7701, SF 5576
5	Bangle or ring	fragment of bangle or ring of small diameter, asymmetrical oval section, plain.	shale	Area 4, context 10579, SF 5929

6	Bracelet	fragment of bracelet, almost half, plain curved outer face, V-angled inner face, showing evidence of lathe turning. W: 6.5 mm	shale	Area 4, context 5847
7	Bracelet	probable bracelet fragment, possibly unfinished. Evidence for lathe turning. Profile needs confirmation	shale	Area 4, context 5911
8	Bracelet	fragment of bracelet, half of band, asymmetrical oval section, plain, Lathe turned. W: 6.5 mm	shale	Area 4, context 7701, SF 5526
9	Bracelet	fragment of bracelet, asymmetrical oval section, plain. Lathe turned	shale	Area 4, context 9784,
10	Bracelet	2 x joining fragments of bracelet, irregular circular section, plain. Lathe turned. W: 6.5 mm	shale	Area 4, context 10354, SF 5888
11	Bracelet	fragment of bracelet, asymmetrical oval section, plain. Lathe turned.	shale	Area 4, context 10575, SF 5927
12	Bracelet	fragment of bracelet, asymmetrical oval section, plain. Lathe turned	shale	Area 4, context 10647, SF 5938

Assessment and further work

DUGM 1988 Area 2

The single piece of shale from DUGM Area 2 on its own has limited group value, but its presence should be recorded and the object illustrated.

SLGM Area 4

The small assemblage from SLGM 2006 Area 4 has group value and should be published and selected objects illustrated.

C.6 Worked flint

Hugo Lamdin-Whymark

Introduction

Seventy-seven struck lithic artefacts and one fragment of a ground stone axe were recovered from excavations at Gill Mill Quarry between 1988 and 2009 (Table C.6.1). In addition, eight pieces of burnt unworked chert of local origin was recovered. The assemblage includes artefacts dating from the Mesolithic, Neolithic and late Neolithic/early Bronze Age. This assessment characterises the assemblage and presents recommendations for further work.

Methodology

The lithics were catalogued according to broad artefact/debitage type and retouched pieces were classified following standard morphological descriptions (Bamford 1985, 72-77; Healy 1988, 48-49; Bradley 1999, 211-227; Butler 2005). Additional information was recorded on the condition of the artefacts including, burning, breakage, the degree of edge-damage and the degree of cortication. Unworked burnt chert was quantified by weight and number. The assemblage was catalogued directly onto a Microsoft Access database and data manipulated in Microsoft Excel. A catalogue of lithics is presented in Table C.6.2.

Provenance

The majority of the lithics from DUGM and SLGM were recovered from superficial deposits, such as topsoil, subsoil and alluvium, or Iron Age and Roman archaeological features, but a small number of artefacts were recovered from potentially prehistoric features. These comprise: DUGM88 Tr 16/5, pit/tree-throw hole 28 (four flakes); DUGM88 Tr 16/2, pit 21 (two flakes and a bladelet); DUGM89 pit 1001 (six flakes, a blade and a chip); DUGM00 pit 36, fill 37 (single platform blade core and an opposed platform blade core reused as a processor - possibly Mesolithic); SLGM06 tree throw hole 12845, fill 12846 (hammerstone/processor).

Raw material and condition

The raw material included chalk flint that exhibited a thick white unabraded cortex and gravel flint that exhibited either a thin abraded white cortex or a worn pitted surface. These raw materials were almost equally represented and both are available from the chalklands c 20 km to the south. No flint is available locally, but one single platform blade core was manufactured from a poor quality chert available from the local gravels. This core was abandoned after a few blades and flakes were removed due to flaws in the material and it would appear that this material was not commonly exploited. The burnt unworked stone was exclusively local chert.

The flint assemblage was of variable condition, but most artefacts exhibited slight to moderate edge-damage. The majority of flint also bore a moderate to heavy white cortication and a few artefacts were iron-stained orange.

The assemblage

The lithic assemblage contains artefacts dating from the Mesolithic, Neolithic and early Bronze Age. The Mesolithic component of the assemblage comprises a large 72 mm long tranchet axe

sharpening flake (SLGM06, alluvium 6339, SF5152), a crested blade (SLGM06 context 6329) and various cores, blades and flakes that are the product of a blade-orientated industry. The blades typically exhibit dorsal blade scars and parallel-sides, indicating a careful and controlled reduction strategy. The cores recovered also reflect an emphasis on blade production. In total, three single platform blade cores and an opposed platform blade core, which was re-used as a processor, were recovered, but only two flake cores were found. Two of these blade cores were recovered from a potentially contemporary feature (DUGM00 Pit 36, fill 37), including the opposed platform core that was reused as a processing tool; the latter has fine battering on one end with four distinct facets. A similar tool on a rectangular retouched flake that also exhibits fine battering was retrieved from an undated tree-throw hole (SLGM06 12845, fill 12846). The Mesolithic lithics were widely distributed across the excavation area and show no particular concentration.

The later Neolithic and early Bronze Age component of the assemblage includes several diagnostic artefacts, comprising: a later Neolithic chisel/petit tranchet derivative arrowhead (DUGM95, Roman? gully 14/5, fill 14/3), a late Neolithic/early Bronze Age barbed and tanged arrowhead of Sutton type B (SLGM04, Roman ditch 4116, fill 4115) (Green 1980; Green 1984), a late Neolithic/early Bronze Age scale-flaked knife (SLGM06, late Roman pit 5885, fill 5890, SF5083) and a Neolithic or early Bronze Age ground stone axe fragment of an igneous rock possibly originating from Cornwall (SLGM06, Roman ?tree-throw 12360, fill 12361, SF12004). In addition, many of the scrapers were manufactured on large hammer flakes, possibly indicating that they are Neolithic or early Bronze Age rather than Mesolithic. The flake debitage recovered from some of the undated pits may also date from the Neolithic or early Bronze Age (DUGM88 Tr 16/5 pit/tree-throw hole 28, DUGM88 Tr 16/2 pit 21 and DUGM89 pit 1001).

Potential

The lithic assemblage from the excavations provides only limited evidence for activity in the Mesolithic and later Neolithic/early Bronze Age, but it indicates a presence in the landscape and a small number of contemporary features have been identified. The flint assemblage, however, has no potential for further analytical work, but several of the artefacts are of intrinsic interest. The petrography of the stone axe is also important as this will clarify the source of the raw material and add to the distribution of these artefacts across the British Isles.

Recommendations

A summary publication text of c 1000 words with enhanced artefact descriptions and two tables should be prepared. Approximately 10 flints should be illustrated to demonstrate the technology employed and key artefact types. Photographic illustration would be appropriate, particularly if the images are reproduced in colour.

The stone axe should be thin-sectioned for the purpose of identification and sourcing.



Table C.6.1: The lithic assemblage from Gill Mill by excavation season and artefact category type

Category Type	DUGM88	DUGM89	DUGM90	DUGM93	DUGM95	DUGM97	DUGM00	DUGM01	SLGM04	SLGM06	SLGM09	Grand Total
Flake	12	7	1	1	2	1				13	2	39
Blade	4	1				1				2	1	9
Bladelet	1		1							1		3
Blade-like	1				1					2		4
Irregular waste										1		1
Chip	1	1										2
Crested blade										1		1
Single platform blade core	1						1			1		3
Core on a flake			2									2
Chisel arrowhead					1							1
Barbed and tanged arrowhead									1			1
End scraper									1			1
Side scraper										1		1
Denticulated end and side scraper							1					1
End and side scraper with two spurs										1		1
Disc scraper										1		1
Scraper on a non-flake blank										1		1
Scale-flaked knife										1		1



Category Type	DUGM88	DUGM89	DUGM90	DUGM93	DUGM95	DUGM97	DUGM00	DUGM01	SLGM04	SLGM06	SLGM09	Grand Total
Retouched flake	1											1
Stone axe fragment										1		1
Tranched axe sharpening flake										1		1
Hammerstone/processor						1				1		2
Grand Total	21	9	6	1	4	2	2	1	2	35	3	78
Burnt unworked chert No./wt			2/ 4 g							6/ 57 g		8/ 61 g
No. of burnt flints	3	2	1	1	1		1		1	5	1	16
No. of broken flints	3	4	1		2		2		2	11	3	28

Table C.6.2: Catalogue of lithics

Area	Cxt	SF No.	Category type	Burnt	Broken	Wt (g)	Comments	Cortication	Post Depositional Damage
DUGM88	0	349	Flake				topsoil.	Heavy Cortication	Heavy post depositional damage
DUGM88	0	349	Blade	1			Topsoil. Dorsal blade scars. Platform abrasion. Mesolithic or early Neolithic.	Moderate Cortication	Moderate post depositional damage
DUGM88	0	349	Retouched flake				Topsoil. Irregular removals on a small flake. No form.	Heavy Cortication	Heavy post depositional damage
DUGM88	0	350	Single platform blade core			31	one main platform, but one other earlier in life. Mesolithic/early Neolithic?	Heavy Cortication	Slight post depositional damage
DUGM88	62/1		Flake				possibly 6211?. No cortication. Gravel flint. Brown and translucent		Fresh



Area	Cxt	SF No.	Category type	Burnt	Broken	Wt (g)	Comments	Cortication	Post Depositional Damage
DUGM88	16/2		Blade				16 tr2. ctx 2. sub alluvium. Chalk flint. Dorsal blade scars. Mesolithic?	Moderate Cortication	Moderate post depositional damage
DUGM88	16/2	340	Blade-like				16 tr2. ctx 2. sub alluvium. Chalk flint. Thin and regular. Mesolithic or early Neolithic?	Moderate Cortication	Moderate post depositional damage
DUGM88	16/3	342	Flake				16 Tr2. ctx 3/1	Moderate Cortication	Fresh
DUGM88	16/5	346	Blade		1		Tr16/5/1. parallel sides. Dorsal blade scars. Mesolithic.	Heavy Cortication	Moderate post depositional damage
DUGM88	10/9	347	Flake				TR10/9/1. chalk flint. Platform abrasion. Regular	Moderate Cortication	Slight post depositional damage
DUGM88	16/21		Bladelet				tr 16/2. ctx 21/1. dorsal blade scars. Mesolithic or early Neolithic	Light Cortication	Slight post depositional damage
DUGM88	16/21	343	Flake				tr 16/2. ctx 21/1. probably residual	Heavy Cortication	Moderate post depositional damage
DUGM88	16/21	343	Flake	1	1		tr 16/2. ctx 21/1. thin	Moderate Cortication	Slight post depositional damage
DUGM88	16/23	345	Blade				Tr16/2. ctx 23/1. 40 mm by 12 mm. Mesolithic?	Heavy Cortication	Slight post depositional damage
DUGM88	3/23	351	Flake				Area 10 Tr3/23/1. residual	Heavy Cortication	Moderate post depositional damage
DUGM88	16/27	344	Chip				Tr 16/5 ctx27/1	Heavy Cortication	Slight post depositional damage
DUGM88	16/28	341	Flake				Tr16/5. ctx 28/1. chalk flint	Moderate Cortication	Slight post depositional damage
DUGM88	16/28	341	Flake	1	1		Tr16/5. ctx 28/1.	Light Cortication	Slight post depositional damage
DUGM88	16/28	341	Flake				Tr16/5. ctx 28/1.	Moderate Cortication	Slight post depositional damage
DUGM88	16/28	341	Flake				Tr16/5. ctx 28/1.	Heavy Cortication	Slight post depositional damage
DUGM88	10/39	348	Flake				large flake. Tr10/20 Ctx 39/1. residual	Iron stained	Heavy post depositional damage
DUGM89	1001		Flake				1001/2. chalk flint cortex	Moderate Cortication	Slight post depositional damage



Area	Cxt	SF No.	Category type	Burnt	Broken	Wt (g)	Comments	Cortication	Post Depositional Damage
DUGM89	1001		Flake	1	1		1001/2	Heavy Cortication	Slight post depositional damage
DUGM89	1001		Flake		1		1001/2	Moderate Cortication	Moderate post depositional damage
DUGM89	1001		Flake	1	1		1001/2. thin abraded gravel flint cortex.	Heavy Cortication	Slight post depositional damage
DUGM89	1001		Flake				thin white gravel flint cortex.	Moderate Cortication	Slight post depositional damage
DUGM89	1001		Flake				1001/2. platform abrasion	Moderate Cortication	Slight post depositional damage
DUGM89	1001		Chip					Heavy Cortication	Slight post depositional damage
DUGM89	1001	1	Blade		1		1001/1. gravel flint? Thin white cortex. Platform abrasion. Good use-wear. Mesolithic?	Moderate Cortication	Slight post depositional damage
DUGM89	1002		Flake				thin. Regular	Heavy Cortication	Slight post depositional damage
DUGM90	0	511	Flake				quite cherty feel to the raw material	Iron stained	Moderate post depositional damage
DUGM90	2004	574	Core on a flake			36	large gravel? Flint flake with small crude hinged flake removals. 2004/c/2 -	Iron stained	Slight post depositional damage
DUGM90	3005		Burnt unworked			3	3005/b/2. chert		
DUGM90	3018	577	Core on a flake			39	squat flake removals. Probably Neolithic.	Heavy Cortication	Moderate post depositional damage
DUGM90	3033		Burnt unworked			1	3033/a		
DUGM90	3522		Bladelet	1	1		regular parallel sides. Mesolithic or early Neolithic?	Heavy Cortication	Slight post depositional damage
DUGM93	6		Flake	1				Moderate Cortication	Fresh
DUGM95	3		Chisel arrowhead				one side natural snap the other is retouched. Petit Tranchet Derivative.	Heavy Cortication	Slight post depositional damage
DUGM95	4		Flake				thin	Heavy Cortication	Slight post depositional damage



Area	Cxt	SF No.	Category type	Burnt	Broken	Wt (g)	Comments	Cortication	Post Depositional Damage
DUGM95	5		Blade-like		1		heavy cortication and modern break.	Iron stained	Slight post depositional damage
DUGM95	36		Flake	1	1		two fragments	Moderate Cortication	Slight post depositional damage
DUGM97	3		Flake				chalk flint	Heavy Cortication	Moderate post depositional damage
DUGM97	164		Blade				quite thick blade. Mesolithic or early Neolithic?	Moderate Cortication	Slight post depositional damage
DUGM00	37		Single platform blade core		1	19	small area broken from one edge. flat backed core. Platform exhausted. Chalk flint? Platform abrasion. Mesolithic	Light Cortication	Fresh
DUGM00	37		Hammerstone/processor	1	1	75	dark brown flint with an abraded grey gravel cortex. Re-uses on a large opposed platform blade core. Fine pecking from use as a processor to one end four distinct facets. Mesolithic	Light Cortication	Fresh
DUGM01	118		End and side scraper				On thick chalk flint flake. Hard hammer. Abrupt retouch. Denticulated edge. Neolithic or Bronze Age?	Heavy Cortication	Fresh
SLGM04	4115		Barbed and tanged arrowhead		1		light surface staining, only apparent as broken tang, one barb and tip don't show this damage. Damage suggests residual in later context. 24 mm long by 21+ mm wide by 4.5 mm thick manufactured on a corticated gravel flint flake. Sutton Type b.	Light Cortication	Slight post depositional damage
SLGM04	4154		End scraper	1	1		on thick hard hammer flake. Abraded gravel flint cortex. Neolithic or Bronze Age	Moderate Cortication	Fresh
SLGM06	5020		Flake	1	1			Moderate Cortication	Moderate post depositional damage
SLGM06	5041		Flake					Light Cortication	Slight post depositional damage
SLGM06	5156		Burnt unworked			2	flint or chert.		
SLGM06	5187		Blade-like	1			thin regular. Mesolithic/Neolithic. Residual.	Light Cortication	Moderate post depositional damage



Area	Cxt	SF No.	Category type	Burnt	Broken	Wt (g)	Comments	Cortication	Post Depositional Damage
SLGM06	5890	5083	Scale-flaked knife				chalk flint. Slightly crude example of form but reasonably invasive pressure flaking. Leaf-shaped 59 mm long by 23 mm wide and 6 mm thick proximal end possibly used as a strike a light. Late Neolithic/early Bronze Age	Light Cortication	Slight post depositional damage
SLGM06	6329	5156	Flake	1	1		small fragment	Moderate Cortication	Fresh
SLGM06	6329	5156	Rejuvenation flake other		1		crested blade. Slight distal crestring. Parallel sides. Very narrow. 35mm+ by 8 mm wide. Good use damage. Mesolithic.	Moderate Cortication	Fresh
SLGM06	6335		Scraper on a non-flake blank				flint from local gravels? Irregular straight retouch.. Neo/BA?		Slight post depositional damage
SLGM06	6339	5152	Axe sharpening flake				classic example of a tranchet axe sharpening flake. 72 mm long 30 mm wide by 11mm thick. First removal. not re-sharpening. Mesolithic.	Iron stained	Fresh
SLGM06	6496		Flake				thin abraded gravel flint cortex. Slight black band beneath. Regular. Platform abrasion. Meso/Neo?	Moderate Cortication	Moderate post depositional damage
SLGM06	7710		Flake				good use-wear. Plt abr. Neolithic/early Bronze Age?	Moderate Cortication	Slight post depositional damage
SLGM06	7710		Burnt unworked			15	burnt flint or chert		
SLGM06	7872		Flake		1		some use. Abraded white cortex	Heavy Cortication	Moderate post depositional damage
SLGM06	7992		Other scraper	1			burnt before retouch. Tight hand side has two spurs, distal end rounded by use, then retouched further. Very neat retouch on a large flake. Neolithic to early Bronze Age?		
SLGM06	7997		Blade-like		1		Mesolithic? Dorsal blade scars	Moderate Cortication	Moderate post depositional damage
SLGM06	8418		Burnt unworked			5	chert		
SLGM06	8722		Flake				gravel flint. Regular	Moderate Cortication	Heavy post depositional damage



Area	Cxt	SF No.	Category type	Burnt	Broken	Wt (g)	Comments	Cortication	Post Depositional Damage
SLGM06	8864		Burnt unworked			6	chert?		
SLGM06	8874		Flake		1			Moderate Cortication	Slight post depositional damage
SLGM06	8877		Irregular waste				gravel thin with a very thin abraded cortex	Iron stained	Moderate post depositional damage
SLGM06	8980		Flake				gravel flint	Light Cortication	Slight post depositional damage
SLGM06	9127		Single platform blade core			35	one poor quality pebble of gravel flint. Probably local chert. Quite narrow removals, but rapidly abandoned due to thermal flaw. Some platform abrasion	Heavy Cortication	Slight post depositional damage
SLGM06	9148		Flake		1			Moderate Cortication	Slight post depositional damage
SLGM06	9148		Side scraper	1	1		burnt and broken. Quite low angle retouch. Manufactured on a broken flake.	Heavy Cortication	Slight post depositional damage
SLGM06	9197		Flake				thin abraded gravel flint cortex		Moderate post depositional damage
SLGM06	9197		Flake		1			Moderate Cortication	Heavy post depositional damage
SLGM06	9735		Disc scraper				smooth well used surface. Large example 50 mm long by 43 mm wide by 12 mm thick. Neolithic to early Bronze Age?	Light Cortication	Slight post depositional damage
SLGM06	10354	5887	Flake				chalk flint. Good use-wear. Regular. Neo/EBA?	Light Cortication	Fresh
SLGM06	10544		Bladelet				some dark iron/magnesium staining	Heavy Cortication	Slight post depositional damage
SLGM06	10811		Burnt unworked			1	burnt flint or chert.		
SLGM06	12361	12004	Stone axe fragment		1	286	large fragment of the blade edge of a greenstone axe. Raw material is a coarse grained igneous rock. Majority of crystals around 2 mm. elliptical section without facets. Dense rock. Possibly Cornish?		
SLGM06	12513		Blade				Chalk flint? Good narrow blade, but slightly	Iron stained	Moderate post depositional damage



Area	Cxt	SF No.	Category type	Burnt	Broken	Wt (g)	Comments	Cortication	Post Depositional Damage
							irregular scars. Mesolithic?		
SLGM06	12719		Blade		1		good use. Mesolithic or Neolithic		Moderate post depositional damage
SLGM06	12846		Hammerstone/processor			45	Gravel flint with thin white cortex and an underlying brown band. Flake trimmed to a rectangle with coarse abrupt edge retouch. 59 mm long by 30 mm wide by max 2 mm thick. Distal end exhibits extensive but quite smooth battering on surface. Damage around curving edge. Photographic illustration?		Slight post depositional damage
SLGM06	13049		Burnt unworked			28	burnt chert or flint. Abraded gravel cortex		
SLGM09	15365		Flake		1		rolled? Residual	Light Cortication	Moderate post depositional damage
SLGM09	15365		Blade		1		orange iron staining. Residual. Abraded gravel flint cortex. Medial segment of a large parallel sided blade with dorsal blade scars. Mesolithic? 30+ mm by 16 mm by 4.5mm	Iron stained	Moderate post depositional damage
SLGM09	15369		Flake	1	1		slight iron staining. Recent break. Chalk flint	Moderate Cortication	Moderate post depositional damage

C.7 Worked stone

Ruth Shaffrey

Summary and Quantification

A total of 845 fragments of stone were retained from the SLGM phases of excavation and 186 from the DUGM phases. The majority of the stone is unworked limestone, some of which is burnt. The worked stone is largely indicative of domestic occupation, but tesserae from DUGM Area 4 are particularly noteworthy.

Table C.7.1: Quantification of worked stone by excavation area

Site Code	Area	OA number	No of fragments	Box No
DUGM 1988	2	-	7	S.01
DUGM 1990	4	-	48	S.02, M.01, AF1
DUGM 1995	6-8	-	28	ST.01-ST.02
DUGM 1997-9	9	189, 287, 330	95	ST.01 and MISC.01
DUGM 2000	13	330	8	MISC.03
DUGM subtotal			186	
SLGM 02	1	704	2	MISC.01
SLGM 04	3	867 + 921	13	MISC.02, MISC.03
SLGM 05-09	4	1059, 1175, 1183, 1248, 1320, 1379, 1492	22 boxes (830 fragments) including 4 unboxed = ST.09, ST.12B, ST.16B, and ST.19	ST.01-ST.22, MISC.06, MISC.08, MISC.14, MISC.16, MISC.17
SLGM subtotal			845	

Methodology

The stone was examined by eye, with any visually unusual stone types being briefly examined with a x10 magnification hand lens. Each context group was scanned rapidly and worked pieces noted. A note was also made of the presence of burnt stone.

Description

The bulk of the retained stone consists of chunks and slabs of limestone, some of which may be structural and at least three of which are roof stones (2 from SLGM and 1 from DUGM). It is possible that more of the slabs may also be roof stones, and more positive evidence of this may be revealed during full recording. Pit 3005 in DUGM Area 4 produced 44 tesserae, mostly in fine pale grey limestone and of small size (eg c 11 x 11 mm, 12 x 12 mm, 12 x 13 mm). Occasional larger ceramic tesserae were also present in this feature.

The worked stone comprises seven hones/whetstones, several hammerstones and processors, five quern fragments, one greenstone axe, a lamp, a figure and a miniature altar (for these see below). Most of the assemblage is indicative of domestic occupation, although stone lamps are unusual finds and, as this is made from oolitic limestone like the figure and altar, it may be associated with them. A further fragment of oolitic limestone, possibly part of a small window surround, is also significant. The figure and altar are indicative of a higher status site. One of the items classified as a rotary quern is a mechanically operated millstone - this will need to be

investigated in terms of context, to determine whether it could have originated at a mill on or near the site.

Catalogue

The stone has been scanned for the presence of worked items and items of unusual lithology and is summarised by approximate box contents below.

Table C.7.2: SLGM (various) box contents and object summaries

Site Code	Box	No.	Notes	SF/objs	SF
SLGM02	MISC 01	2	1 possible quern	Q	
SLGM04	MISC 02	11	mostly burnt and unworked		
SLGM04	MISC 03	2	one possible hammerstone	H	
SLGM06	MISC 04	18	burnt stone		
SLGM06	MISC 06	3	unworked		
SLGM06	MISC 08	12	limestone slabs		
SLGM07	MISC 14	3	unworked pebbles		
SLGM06	MISC 16	20	mostly burnt limestone		
SLGM09	MISC 17	13	Unworked		
SLGM06	ST 01	1	Whetstone.	W	
SLGM06	ST 01	1	possible lamp half. Roughly worked. Smooth inside, possibly from holding a moving pottery vessel. Oolitic limestone	LAMP	30, context 4792
SLGM06	ST 01	33	most of this box is unworked stone		
SLGM06	ST 02	43	chunks and slabs. Limestone, possibly building stone		
SLGM06	ST 03	27	mostly slabby limestone, probably building stone or unworked. Some square flat chunks possibly flooring?		
SLGM06	ST 04	15	mostly slabby limestone, probably building stone or unworked		
SLGM06	ST 05	6	Block, rest prob structural or unworked	BS	
SLGM06	ST 06	4	slabby limestone		
SLGM06	ST 07	46	mostly slabs, some chunks. One deliberately triangular piece	BS	
SLGM06	ST 08	59	Mostly limestone slabs incl some chalk		
SLGM06	ST 09	1	6378 - cobble, unmodified with one flattened smooth area, however, this could be the result of natural wear. Thus probably unused		
SLGM06	ST 10	1	pebble polisher?	POL	5206
SLGM06	ST 10	25	all limestone building stone or unworked		
SLGM06	ST 11	9	limestone roof stones, incl one complete example	RF	

Site Code	Box	No.	Notes	SF/objs	SF
SLGM06	ST 12	19	all slabby limestone building stone		
SLGM06	ST 12B or ST 19	1	UNBOXED still to record		
SLGM06	ST 13	7	large limestone chunks. Some are slabby		
SLGM06	ST 14	80	Whetstone.	W	
SLGM06	ST 14		Burnt (very red) limestone lump. Lots slabby limestone		
SLGM06	ST 14B	2	concrete or some sort of conglomerate		
SLGM06	ST 15	12	hammerstone	H	
SLGM06	ST 15	1	MG quern	Q	
SLGM06	ST 15		some possible roof stones	RF	
SLGM06	ST 15	1	block	BS	
SLGM06	ST 16		STILL TO RECORD?		
SLGM06	ST 16B		7539 loosely cemented conglomerate. Used in building foundations. The pebbles are densely packed and very poorly sorted, some angular. Unworked		
SLGM06	ST 17	79	lots small fragments. Mostly limestone and mostly looks unworked		
SLGM06	ST 18		1 square bit		
SLGM06	ST 18		mostly unworked limestone		
SLGM06	ST 18		possible polisher	POL	
SLGM06	ST 12B or ST 19		Millstone, 700+mm diameter, lower stone with concentric wear. Rough base. <10%	Q	5823, cxt 10186
SLGM06	ST 20		3 possible hammerstones	3 H	
SLGM06	ST 21	123	small unworked fragments		
SLGM08	ST 22 (big)	59	greenstone axe		
SLGM08	ST 22 (big)		firecracked pebbles		
SLGM08	ST 22 (big)		rotary quern, lower stone, ORS	Q	
			7529 -concretion as 7539 but not on list. No ST number		
SLGM06	BM1	1	Roof-stone with perforation, shelly limestone	RF	

Table C.7.3: DUGM (various) box contents and object summaries

Site Code	Box	No	Notes
DUGM	AF 1	44	tesserae
DUGM 98	ST 1	1	Belemnite central frag

DUGM 98	ST 1	2	two possible slab type hones
DUGM 95	MISC 01	1	possible used chalk
DUGM 95	ST 2	24	this box mostly unworked
DUGM 95	ST 2	1	roof stone fragment with perforation
DUGM 95	ST 2	1	possible slab hone
DUGM 97	ST 1	54	unworked burnt? Limestone
DUGM 95	ST 1	2	unworked
DUGM 95	ST 1	1	quern frag, ORS, small
DUGM 95	ST 1	1	whetstone
DUGM 97	MISC 2	1	slab hone
DUGM 00	MISC 3	2	burnt (heat cracked) pebbles
DUGM 99	MISC 2	1	worked oolitic limestone
DUGM 99	MISC 2	1	slab hone

Statement of Potential

The assemblage has some potential to add to understanding of the site. Most of the worked stone is indicative of domestic use, but its distribution needs to be analysed in relation to that of other finds categories on site. Limestone is not immediately local to the site. Definition of approximate source areas for this material can shed light on the nature of regional resource exploitation. The limestone may have served a structural function, including a specialist one in the case of the tesserae. It is notable, however, that it was the preferred construction material for the road surfaces on site, whereas 'rag rock', a concreted gravel that does occur sporadically within the gravel at Gill Mill, was preferentially used for the stone foundations of the two rectangular buildings in SLGM Area 4.

The worked oolitic limestone pieces may be indicative of higher status elements within the site. These can be carefully recorded and analysed and discussed in conjunction with any other unusual items (particularly with religious/ritual associations) from the site. A further notable characteristic of the assemblage is the small number of quern stones. Comparison of these data with those for other Upper Thames Valley sites may shed valuable light on the nature of domestic activity at the site in relation to the agricultural regime followed here.

Recommendations for further work

All the worked stone artefacts should be fully recorded. The potential building and roofing stone should be recorded, counted, weighed and then categorised and discarded if unworked and/or burnt. Any roofing material should be interpreted alongside the ceramic building material.

Further research will be required for the figurines and the stone lamp in order to determine their significance on this site. The oolitic limestone will need careful examination to determine its most likely source.

A report will be written which describes the worked stone roofing and artefacts (lamp, hammerstones, querns, axe and whetstones) and which places them in a regional context.

Ten items have been selected for illustration.

C.8 Ceramic figurines and sculpture

Paul Booth

Figurines

Fragments of three 'pipe-clay' figurines, all of Venus type, were recovered from the Phase 2 works, all from Area 4. These are:

Context 5797, pit 5792 (SF 5094). Large part of body - 1 fragment (65 g).

Context 10142, pit 10141 (SF 5833). Feet - 1 fragment (28 g).

Context 10256, ditch 10255. Fragment of base with foot (5 g).

SF 5094 is from a pit fill dated AD 170-220, while the other two fragments are from features dated after AD 240.

The semi-draped Venus, with the right hand raised to her hair, is the commonest of the figurines imported into Britain from Gaul, primarily in the 2nd century, and is intrinsically unremarkable. The type is widely distributed in south-eastern Britain (van Boekel 1993, fig. 110). Such objects are, however, rare as finds in the region, occurring at sites such as the small town of Dorchester on Thames (unpublished) and the villa at Shakenoak (Brodribb et al. 2005, 22, nos 5-9), but not known at other types of rural settlement. The present pieces, from three different figurines, therefore provide an important and unusual perspective on domestic religious practice at this site.

A further but very different ceramic piece that may be of relevance in this connection is a modelled head from a flagon in Oxford colour-coated ware (SF 5908, context 10389, Plate 5) from late Roman ditch 10387. This unique piece is a little larger than the typical and comparatively common moulded faces from flagons of Young (1977) type C11. The hand modelled features are supplemented by eyes and a band of hair at the back of the head (above the handle attachment) marked out with a segmented ring stamp, while further decoration, including the eyes and a wavy band of hair framing the face, is done with white slip. The ensemble is striking and may have been an individual commission. Such pieces are more likely to have been used in the context of domestic religious practice than for mundane serving of liquid, for which the cupped shape, like that of C11, is not well suited.

Sculpture

There are five fragments of carved stone sculpture from Gill Mill, from four separate pieces, all in oolitic limestone. One of these must be an antiquarian find as it is built into a wall of one of the outbuildings of Gill Mill House. It is a small relief panel of a horse and rider. Two joining fragments of an (incomplete) altar to a Genius were recovered from DUGM Area 4 in 1990. These and the older piece have been published by Henig in the CSIR volume for the Cotswolds (Henig 1993, nos 36 (Genius) and 124 (horse and rider)) and do not require detailed treatment here.

Two further pieces of carved stone were recovered during the Phase 2 work in SLGM Area 4. These are:

Context 9869, ditch 9834 (SF 5810). A figure of a Mater-type goddess, mostly complete, but missing the head and quite heavily eroded at the front (Plate 4). Part of the left shoulder survives as two small separate (newly broken) fragments. The figure appears to be standing (rather than being seated, as many figures of this type are). To her right is a low column, but the

opposite side does not carry recognisable moulded detail in the corresponding position. The figure is heavily draped and holds out part of her dress in front of her, but the hands and the outermost part of the dress are eroded away, so it is not clear if anything was held in the dress at this point. The back is plain. The figure belongs to a well-established regional Cotswold tradition (eg Henig 1993, nos 116-121), but is not exactly paralleled by any of the known examples. Height 185 mm, width 96 mm, depth 62 mm.

Context 10884, ditch 10882 (SF 5960). A simple miniature altar, uninscribed. The four faces of the altar are smooth and slightly recessed between the projecting base and upper part. The altar is not quite square in section (or uniform in height) but all four sides are treated in the same way. The top of the altar is flat, except for weathering of some of the edges and modern damage to one corner. It has a very well-defined, rounded focus, c 35 mm in diameter and c 31 mm deep. The piece has slight damage to the edges but is less worn than the mater figure. Height 177 mm, width 90 mm, depth 87 mm.

Both pieces are from late Roman ditch fills. The Mater figure was found face down in context 9869, the second of four fills of ditch 9834. In addition to late Roman pottery this fill produced a coin dated AD 350-364, so a date of deposition after AD 350 seems certain. The altar was from the upper fill of ditch 10882, dated after AD 240. The two fragments of the Genius, 1990 SF 559 and SF 560, were unstratified pieces from the northern end of Area 4. The overall distribution of worked stone religious items is therefore widespread across the site (the original location of the horse and rider relief is of course unknown), whereas that of the ceramic pieces, while not tightly defined, is considerably more constrained, lying entirely within SLGM Area 4 on the north-east side of the Roman road. The combined distribution is notable, however. The two stone pieces from SLGM were found in the north and east ditches of a large well-defined rectangular enclosure set back from the road in the middle of Area 4. Two of the clay figurine fragments came from adjacent features within the south-west corner of the same enclosure, while the flagon head came from a subsidiary ditch just to the south. Only figurine SF 5094 came from further away, being found in a pit some 65 m west of the enclosure. Given the overall extent of the site this concentration appears notable and will merit further investigation in conjunction with consideration of other artefact distribution patterns.

C.9 Pottery

Paul Booth

Summary

The combined Gill Mill fieldwork programmes have yielded approximately 55,500 sherds of pottery with a total weight of just under 800 kg. The great majority of this material, 84.6% by sherd count and 82.5% by weight, came from the SLGM excavations, with the majority of this in turn deriving from the principal area of examination of the Roman settlement, in Area 4. The overall assemblage contains a small prehistoric component, almost entirely of middle Iron Age date. A tiny number of sherds of medieval and post-medieval date were also present, but almost none of these were in significant features, and the overall quantity indicates a very low level of (detectable) post-Roman disturbance. The great bulk of the assemblage is therefore of Roman date, ranging across almost the whole of the period, from the middle of the 1st century AD to the middle of the 4th century or a little later. Spatial variation in chronological trends is evident, however. First century activity is relatively localised, typically in areas which were later marginal to the main focus of Roman settlement based around the road network. The main settlement appears to originate in the early 2nd century AD, with activity then sustained beyond the middle of the 4th century but not, apparently, up to the end of the century.

The pottery reflects a major settlement of middling status. The range of material present is predominantly derived from local or regional producers, of which the Oxford industry and an unlocated 'west Oxfordshire' industry are the most important. Characteristics such as the persistent presence of samian ware indicate a settlement above the level of basic rural sites, and a reasonable range of other fine and specialist wares was present, though never in large quantities.

The assemblage is one of the largest excavated from a Roman settlement in the region and on this basis is of particular importance; the rather unusual location and morphological characteristics of the site only serve to enhance this importance.

Methodology

All the pottery was scanned rapidly, the principal objectives being to achieve broad characterisation of the assemblage and its potential for further analysis, identification of particularly unusual pieces or groups, and spot-dating of each group to inform the process of phasing of the site sequences. Sherd count and weight totals were recorded for each context group. It should be noted that in most cases these figures were derived from OA finds department data and generally do not take account of recent breaks which will be factored out in full recording. The effect of this is that the 'real' sherd total will be a little less than that given here, but conversely the mean sherd weight will be slightly higher.

A note was made of the principal wares or ware groups present in each group and in some cases individual vessel forms were also noted. The ware and other codes used were standard ones as set out in the OA system for recording late prehistoric and Roman pottery (Booth 2008). Fabric codes in this system are correlated with the National Roman Fabric Reference Collection (Tomber and Dore 1998) where appropriate. No systematic quantification of individual fabrics was undertaken, so some aspects of the following assessment are impressionistic in character. The date assigned to each group is usually a terminus post quem, or less commonly a range within which the group is likely to date, in either case based entirely on internal ceramic criteria.

Condition

The condition of the pottery is quite variable. The overall mean sherd weight, about 14.4 g, is reasonably high for an upper Thames Valley site, but may be slightly inflated as a result of the fairly common occurrence of sherds of fabric O81, characteristically representing large, heavy jars of uncertain function (see below) with a skewing effect similar to that seen in assemblages where amphorae were relatively common. Soil conditions across the site were quite variable and surface preservation was similarly variable. In some contexts, ferruginous staining of a type seen in a number of Upper Thames Valley sites was common. Elsewhere the preservation of colour-coated surfaces was compromised, both by the staining just mentioned and by erosion of surfaces, with consequences for the separation of Oxford colour-coated wares from coarse wares of similar basic fabric. The representation of Oxford colour-coated wares is therefore almost certainly underestimated at present.

Waterlogging has had varying effects on the pottery. In some cases formerly waterlogged sherds are particularly prone to splitting as they have dried. In other cases, however, sherds buried in damp environments have particularly well-preserved surfaces. It is not clear if there is a close correlation between variation in surface condition and very specific characteristics of the fills of certain types of features. This is a topic that could be examined in further work. Variability in the surface condition of sherds has implications for other characteristics, but in some cases burnt deposits and limescale were present, indicating the potential for recovery of evidence relating to vessel use.

Fabrics, wares, and pottery supply

Pottery supply in this part of the Upper Thames region is dominated for much of the Roman period by the products of two industries, the multi-faceted Oxford industry to the south-east and a less well understood 'west Oxfordshire' industry. The precise location of the latter is not known and it is identified on the basis of its products, of which a fine densely sandy reduced fabric (R37 and R38) is the most numerous. This and related fabrics, which include an oxidised coarse ware equivalent (O37) and a probable red-brown colour-coated version as well, are comparable in general terms to the fine sandy fabrics of the north Wiltshire pottery industry. That the two are distinct, however, is suggested by the domination of assemblages achieved by the R37 'family' at the Akeman Street sites of Asthall and, in particular, Wilcote, to the extent that a production source relatively close to these sites seems likely (Booth 1997, 117-9). These sites lie closer to the Oxford kilns than the north Wiltshire ones, and on the basis that the dominant supplier is likely to have lain fairly close at hand a significant input to these sites from the north Wiltshire industry seems improbable. Wilcote lies a mere 8.5 km north of Gill Mill, and a production centre located (for the sake of argument) in its vicinity would have been well placed to dominate supply to the present sites.

The 'west Oxfordshire' industry was in production by the Flavian period at the latest, and was therefore a substantial source by the time that the main Roman settlement was established at Gill Mill in the early 2nd century. (The distinctive late Iron Age-early Roman 'Belgic type' fabrics of the E ware group, which formed a major component of assemblages in the region up to the early Flavian period, were therefore very poorly represented at Gill Mill). The 'west Oxfordshire' industry was particularly important in the 2nd century, but production probably continued throughout the 3rd century as well, though it is unclear for how long, if at all, it was maintained into the early 4th century. The reduced coarse ware component of many of the later Roman context groups appeared to be less heavily dependent upon R37, which was largely supplanted by other fine and moderately sandy fabrics in the R10 and R30 ware groups. These

are unfortunately not very diagnostic groups. Many sherds in these groups could have derived from the Oxford industry, but this need not have been their only source.

Oxidised coarse wares formed a part of the repertoire of both Oxford and 'west Oxfordshire' industries, but were in fact relatively unimportant at Gill Mill. The only significant exception to this was O81, 'pink grogged ware'. This distinctive fabric is known to have been made at Stowe in Buckinghamshire, although it is not certain that this was its only production centre. Although the industry had a wide repertoire of coarse ware forms much the most important was a very large, heavy, rounded jar, whose wide distribution suggests that it might have been traded as a container for a specific product, rather than just as an empty storage vessel. While certainly present in the 2nd century, most occurrences of the large jar in the Upper Thames region seem to be in 3rd-4th century contexts. The fabric was identified in a minimum of 106 context groups at DUGM and 393 groups at SLGM.

Other significant components of the coarse ware assemblage were shell-tempered and black-burnished wares. Both groups include products from several sources. Much of the black-burnished ware was typical BB1 (OA fabric B11) from Dorset, but wheel thrown imitations, usually grouped in the B30 category, were also present, mainly in later Roman contexts. There may have been a peak in BB1 supply in the later 3rd century, but this will require confirmation from quantified data. The shell-tempered ware (C10) group presents more problems. The fabrics of one or more local/regional sources, probably in production in the late 1st and 2nd centuries, are not readily distinguished from other sources, including the well-known Harrod (Beds) industry, which had a wide distribution in the late Roman period. All of these sources are likely to have been represented in the Gill Mill assemblage, and are generally noted using the code C11, but distinguishing between them has not been attempted at this stage.

The so-called fine and specialist wares have been used in the region as a guide to variations in site character and status (eg Booth 2004; 2007). The principal components of this group are overseas imports, essentially samian ware and amphorae, and fine wares, mortaria, white and white-slipped wares - all groups dominated by products of the Oxford industry. None of these has been quantified at this stage, but the presence of samian ware and amphorae was noted consistently and is shown in Tables C.9.2 and C.9.4 below. Samian ware was present in a minimum of 12.6% of all context groups at DUGM but was more common in the SLGM assemblage, occurring in 30.9% of all context groups there, with the highest frequency in Tar Farm Area 4. This is quite a significant level of occurrence. The bulk of the samian ware seems to have been Central Gaulish; a general lack of South Gaulish material reflecting both a genuine paucity of mid-late 1st century occupation at Gill Mill and also a regional tendency towards a low level of occurrence of this pottery in all except the highest status sites, even where occupation from the mid 1st century is clearly demonstrable. One of the largest samian ware assemblages from the region, from the extramural settlement area of Alchester, was characteristic in being dominated by Central Gaulish material of Antonine date, with a strong emphasis on plain forms (Dickinson 2001). Amphorae were much less common than samian ware, but were present in 3% of context groups at DUGM and 4.5% of such groups at SLGM, where again they were most common in Area 4. Although these figures only represent quite small numbers of vessels this is nevertheless a level of occurrence distinct from that at lower status rural sites in the region, where amphorae appear in tiny numbers and in some cases not at all.

As noted above, identification of Oxford colour-coated ware (F51) was hampered in some cases by the condition of the sherds. A further complicating factor was the presence of vessels in a brown colour-coated fine oxidised fabric(s) which did not appear to be typical products of the Oxford industry and might derive from a different source. In the assessment record these are usually noted as F50 (the generic code for fabrics of this type, rather than the specific F51).

Beaker forms, which are not a particularly prominent part of the Oxford repertoire, are well-represented in this group. Their chronology may mirror that of Oxford colour-coated ware (ie c AD 240-400), but it is possible that some these vessels predate that range. Other components of the fine ware group include Nene Valley (F52) and a few New Forest (F53) sherds - the latter very much at the northern limit of their distribution. Occasional Continental imports are also present, such as Central Gaulish and Moselkeramik versions of 'Rhenish' ware (F43 and F44 respectively). Sources other than the Oxford industry are difficult to identify amongst the other fine and specialist ware groups, although it is highly unlikely that all the white wares, for example, derived from this industry. It is clear, however, that mortaria at Gill Mill were almost entirely Oxford products, occurring in all three fabrics used for those vessels within the industry (M22, M31 and M41).

Chronology

Some aspects of chronology have been referred to above. Prehistoric activity, essentially of middle Iron Age date (a rim sherd of probable late Bronze Age date from Phase 1 1993 (Area 6) context 10/6, is exceptional), is identified on the basis of a combination of feature form and associated ceramics. While the quantity of the latter in this period is small, it forms a consistent group, characterised mainly by sand-tempered and shell-tempered fabrics and by fairly undistinctive vessel forms, mainly of barrel shape, although the isolated middle Iron Age settlement in DUGM Area 10 also produced a decorated globular bowl characteristic of the later middle Iron Age in the region. Sherds specifically of early Iron Age character were only seen in one context assemblage, in DUGM Field 2, Trench 7, but this group was of late Roman date.

Pottery evidence indicates a very low level of activity in the Gill Mill area in the late Iron Age-early Roman period. The material most characteristic of this period (E wares in the OA system) are strictly limited in quantity and distribution. They occurred in small amounts in the DUGM 1995 area, but here usually in association with 'Romanised' reduced coarse wares. At SLGM E wares were an important component of the Area 2 assemblage, although here again their associations suggest that they may belong entirely to the post-Conquest period. Occurrences within Area 4 are strictly localised.

The fact that the 'west Oxfordshire' industry was in production in the later 1st century AD means that features dominated by pottery in fabrics such as R37 and R38 could date to this period. In fact there are very few significant groups of this character, and the overwhelming volume of evidence suggests that the bulk of settlement activity at Gill Mill was not underway before the early 2nd century. Although arguments based on negative evidence are less secure than those based on presence, the relative scarcity of products such as South Gaulish samian ware and Verulamium region mortaria and other white ware is consistent with a minimal level of activity in the later 1st century.

Products such as black-burnished ware, Central Gaulish samian ware and Oxford white ware mortaria are markers of a date after c AD 120 (technically c AD 100 for the mortaria), although of course they were not automatically present at such an early date. The pottery evidence suggests continuous activity in many parts of the settlement through the 2nd and 3rd centuries and into the 4th. In the DUGM 1995 area, however, there is little evidence for activity after the end of the 2nd century. At SLGM the limited occupation in Area 2 seems not to have extended beyond the mid 2nd century at the latest, while in the marginal 2001 Working Area and Area 5 there is no certain indication of activity beyond the early-mid 3rd century.

The appearance of Oxford colour-coated ware (including mortarium fabric M41) and other related products (mortaria in fabric M31 and the white ware mortaria of Young (1977) types M17 and M18) is a key chronological marker indicating a terminus post quem after the middle of the

3rd century. The appearance of other ceramic types has been used in the same way. These include a number of black-burnished ware types - the simple straight-sided dish indicating a date after c AD 200 and the beaded and flanged bowl a date after at least AD 250 if not AD 270. As indicated above, the presence of fabric O81 has usually been used to indicate a 3rd-4th century date, but the shell-tempered C10/C11 fabrics, which in many areas would be a late Roman marker, cannot be used in this way here (for reasons mentioned above) unless they occur as distinctive forms. Late 'Harrold type' jars have been assigned a fairly conservative range of late 3rd century and later. More obviously later 4th century shell-tempered forms, such as dishes and flanged bowls, are effectively absent at Gill Mill (although see below for one example of the latter).

This absence is one aspect of the 4th century assemblages. Achieving more precise chronological definition of pottery assemblages assigned to the mid 3rd-4th century range is quite difficult. Many Oxford colour-coated ware types, for example, are simply dated AD 240-400 in Young's (1977) typology, and there has been relatively little refinement of its chronology subsequently, and certainly not in relation to the most common types. Young demonstrated that a few types appear to have been additions to the range at about the beginning of the 4th century, and fewer still were introduced for the first time later. In this region overall the repertoire of coarse ware fabrics and forms shows relatively few clear evolutionary tendencies in the course of the 4th century, and this is certainly true at Gill Mill. Where unencumbered by residual material it is possible to identify groups characteristic of the final third of the 4th century, but no such groups have been positively isolated at Gill Mill. Two groups (4743 and 10150, both in SLGM Area 4) contain Oxford colour-coated ware types (Young (1977) types C76 and C46 respectively) specifically dated after AD 340, while 9417 also contains material for which a date in the second half of the 4th century seems likely. A similar group (74/1) occurred in Field 2 Trench 9 of the 1988 DUGM evaluation. This contained not only a flanged bowl in late shell-tempered ware, perhaps the only such occurrence in the whole site (see above), but also sherds probably from a large jar in Alice Holt sandy reduced ware (fabric R39). This is the most northerly occurrence of this fabric in the region known to the writer and is consistent with a very late Roman date.

The fact that such groups can be detailed individually gives an idea of their rarity. It is of course likely that other groups were also deposited in the second half of the 4th century, but that their contents were not sufficiently distinctive to allow them to be assigned specifically to that period. The pottery evidence mirrors that of the coins, therefore, in lacking a distinct very late Roman component. The overall size of the assemblage is such that such an absence must be significant and suggests a very substantial diminution if not a complete cessation of occupation after c AD 370.

DUGM

The breakdown of the DUGM assemblage by area is shown in Table C.9.1. Relatively significant quantities of pottery came from evaluations of Area 2 and the 1995 areas (6-8). In the former case the area was taken out of the gravel extraction programme, but in the latter no watching brief phase occurred during extraction. The majority of the pottery, however, is from Area 9, evaluated in 1997 and subject to watching brief subsequent to removal of topsoil in 1997-1999. Relatively few of the features thus exposed, however, including a very large number of pits, were excavated, so the overall assemblage is much smaller than that from equivalent areas examined in SLGM. This fact may account for the relatively large number of fairly small assemblages recovered from this part of the site. Only 182 out of some 577 context groups contained more than 10 sherds, and similarly only 155 groups weighed more than 250 g (the two lists are not, of course, necessarily coincident).

Table C.9.1 Quantification of DUGM pottery by area and major period

Area	Prehistoric			Roman			Post-Roman			Comment
	No. cxts	No. sherds	Wt (g)	No. cxts	No. sherds	Wt (g)	No. cxts	No. sherds	Wt (g)	
2		(4)	(26)	86	2814	39900		(2)	(126)	Residual EIA, rest 2C-4C, post-Roman in topsoil. Evaluation only
4				76	1026	19471		(2)	(64)	2C-4C, post-Roman in topsoil etc
10	9	?	?							Middle Iron Age, not located at OCMS store
17							3 + US	6	339	Post-medieval and 2 small medieval sherds. Evaluation only
6-8				55	1563	10661	1	1	7	mostly mid/late 1C-2C, a little late Roman. Evaluation only
9				362	3076	69416				mainly 2C-4C
TOTAL	9	4+	26+	579	8479	139448	4	11	536	

Quantities in brackets are of material residual or intrusive in context groups of other date or unstratified

Aspects of chronological variation between the different DUGM areas have been referred to above. The bulk of the Roman material (92% by weight) comes from areas which form integral parts of the principal settlement focus, with a 2nd-4th century date range. The middle Iron Age pottery from Area 10 only amounts to a few sherds (this material was seen in c 1992 but could not be located recently) but is of a quantity consistent with the likely seasonal use of the small 'Farmoor type' settlement excavated here. Four residual early Iron Age sherds from Area 2 constitute the only positively identified material of this date from the whole site.

The incidence of selected key fabrics (Table C.9.2) provides further indications of variation between the main area assemblages. Representation of samian ware in terms of the proportion of contexts in which it was noted was fairly consistent across the main areas at DUGM, except for Area 6-8, which had an early Roman chronological emphasis and from which, therefore, samian ware was largely lacking (see above for regional chronological trend). The representation of amphorae across these areas is probably at too low a level for variations between them to have any real significance. The pattern of distribution of fabric O81, however, is of some interest. It was much better represented in the two southern areas, 2 and 4, than in the more extensively examined Area 9 to the north. This could reflect functional and/or chronological variation between these areas, but the fairly consistent occurrence of O81 in Areas 2 and 4 is perhaps more likely to indicate the importance of the chronological characteristic, suggesting that there was a greater concentration of 3rd-4th century activity here than in Area 9, despite the similarity of their overall date ranges.

Table C.9.2: Incidence of selected key fabrics in DUGM contexts

Area	No. RB contexts	No contexts with S	%	No. contexts with A	%	No. contexts with O81	%
2	86	11		2		28	
4	76	24		-		24	

Area	No. RB contexts	No contexts with S	%	No. contexts with A	%	No. contexts with O81	%
6-8	55	4		1		1	
9	362	38		14		57	
Total	579	77	13.3	17	2.9	110	19.0

SLGM

The breakdown of the SLGM assemblage by area is shown in Table C.9.3. Here the pottery is summarised in terms of dated context groups. For Area 4 it does not distinguish the very small number of prehistoric (essentially Iron Age) sherds occurring residually within Roman context groups, nor does it distinguish the even smaller number of medieval and post-medieval sherds that were occasionally intrusive in contexts of Roman date. The one genuine post-Roman context group, context 4152, consists of sherds from a single vessel in medieval fabric OXAC (Mellor 1994, 44-52).

The different SLGM area assemblages vary very considerably in size. That from the 2001 working area is too small for meaningful comment except to say that it did include a very small prehistoric component, probably of middle Iron Age date. Further middle Iron Age features were very localised at the north-eastern extremity of Area 3 and in Area 4. The 18 contexts assigned to the Iron Age on ceramic criteria in Area 4 are 5041, 5046, 5137, 6073, 8899, 8905, 8906, 8973, 8979, 8981, 8986, 8999, 9024, 9037, 9112, 9114, 9145 and 9450. Half were specifically dated to the middle Iron Age, while the others were assigned a broad Iron Age date, reflecting an absence of particularly diagnostic fabrics and forms. It is likely, however, that mean average sherd weight of 8.5 g for these contexts indicates a fairly well-fragmented assemblage.

In the extreme north-east corner of Area 3 there is a hint of continuity of activity from the middle Iron Age through the late Iron Age into the early Roman period, potentially a unique occurrence within the whole Gill Mill complex. One of the few distinct, albeit low level, concentrations of 1st century features lay just to the north of here, in the south-east corner of Area 2, and it is quite possible that there was a sequence of small scale settlement development in this part of the quarry complex, with its focus just outside the extracted areas, probably beneath the present day line of Cogges Lane between Areas 2 and 3 and perhaps also to the east. The middle Iron Age focus in Area 4, a single penannular gully, was succeeded in the 2nd century AD by features of the same form in exactly the same location, but apparently without the mid 1st century ceramic component (E wares - see above) which would have confirmed continuous activity in this location.

Table C.9.3 Quantification of SLGM pottery by area and major period

Area	Prehistoric			Roman			Post-Roman			Comment
	No. cxts	No. sherds	Wt (g)	No. cxts	No. sherds	Wt (g)	No. cxts	No. sherds	Wt (g)	
2001 working area	2	4	32	6	66	1092				MIA? and 2C-3C?
2				22	354	5133				all mid 1C-mid 2C
3	5	25	121	78	2579	42729				MIA, ?LIA and early/mid 2C-?mid 4C
4	18	289	2466	1644	42982	584470	1	10	268	MIA, 1C-4C and one medieval group
Head of conveyor				21	413	20868				2C-4C, dominated by sherds of fabric O81

Area	Prehistoric			Roman			Post-Roman			Comment
	No. cxts	No. sherds	Wt (g)	No. cxts	No. sherds	Wt (g)	No. cxts	No. sherds	Wt (g)	
5				35	334	2768				late 1C/early 2C-mid 3C
Total	25	318	2619	1806	46728	657060	1	10	268	

Aspects of chronological variation between the different SLGM areas in the Roman period have already been mentioned. The assemblage from Area 2 was particularly distinctive in being confined to a mid 1st-mid 2nd century date range. It is in fact quite possible that activity in the possible settlement focus in the south-eastern corner of this area ended before the middle of the 2nd century. The chronology of the more extensive field system in this area is not well defined by pottery evidence.

The very large Area 4 assemblage included a very small component of 1st century E wares, but there are no large context groups consisting largely or entirely of such material and the extent of activity of the very late Iron Age-early Roman period is likely to have been very limited at best. Apart from the exceptions already noted, the pottery indicates the commencement of activity in all the main areas not before the end of the 1st century AD at the earliest. Two small groups in Area 5 might perhaps have been of late 1st century date, but an early 2nd century date is just as likely for these and seems probable in the context of understanding of the overall development of the site.

As in the DUGM half of the site the pottery evidence suggests that more marginal areas of the main Gill Mill settlement did not see intensive activity in the later Roman period. This is clearest in Area 5, where late Roman pottery (ie material dated after the mid 3rd century) was completely absent; the well-defined features here were presumably in use at a low level (at best) at this time. In Area 3, however, to the north of the main settlement focus, there is good evidence for the continuation of activity through the second half of the 3rd century, not only in those parts closest to Area 4 but also in the spatially separate curvilinear trackway and enclosure complex further north. The extent to which this level of activity was maintained into the 4th century is less clear, however. Eighteen out of the 78 Roman period context groups were dated after AD 240, but none was specifically dated after AD 300, although the problems of close dating in the late Roman period related to Oxford colour-coated ware (see above) are likely to have been a factor in the lack of precision. There is no doubt that some of these context groups could have been of 4th century date. Equally, however, it seems highly unlikely that any of these groups were later than the middle of the 4th century at the latest.

The incidence of selected key fabrics (Table C.9.4) again provides further indications of variation between the main area assemblages. Overall, samian ware was significantly more common at SLGM than at DUGM, occurring in over 30% of all contexts with pottery. This proportion was slightly higher in the main SLGM area (Area 4) and rather less in the more peripheral areas. Thus, unsurprisingly, samian ware was absent in Area 2 and poorly-represented in Area 5. Amphorae were completely absent from these areas. In strict percentage terms amphorae were most common in Area 4E, but since this amounted to sherds in two (out of a total of 21) contexts it is not a very meaningful statistic. That amphora sherds were present in just under 5% of context groups in Area 4 is more significant. Again their overall incidence is a little higher at SLGM than at DUGM. The same is also true of fabric O81, although here the difference is not great enough to be significant. With the exception of a single sherd in Area 2, thought to be intrusive in an earlier context, this fabric was confined to Areas 3, 4 and 4E, with no significant variation in the frequency of occurrence in terms of the percentage of context groups containing this material. In real terms O81 was a dominant component of the Area 4E

assemblage (forming an estimated minimum of 75% of the pottery from this area by weight), but these sherds were concentrated in a limited number of contexts.

Table C.9.4: Incidence of selected key fabrics in SLGM contexts

Area	No. RB contexts	No. contexts with S	%	No. contexts with A	%	No. contexts with O81	%
2001 working area	6	1		-		-	
2	22	-		-		1	
3	78	19		1		19	
4	1647	531		78		368	
Head of conveyor)	21	5		2		5	
5	35	3		-		-	
Total	1809	559	30.9	81	4.5	393	21.7

Context

A preliminary quantification of pottery by area (excluding the tiny group from the 2001 working area) and context type for SLGM is given in Table C.9.5. This was compiled to provide a more secure characterisation of the assemblage in these terms, in order to test, *inter alia*, the subjective impression that not only were pits an unusually important feature type at this site but also that they produced a very significant proportion of the total pottery assemblage. The figures in Table C.9.5 include contexts of all periods, the contribution of pre- and post-Roman contexts being insufficiently large to have any particular distorting effect on the broad trends represented.



Table C.9.5 SLGM distribution of pottery by context type in main excavated areas (2001 working area omitted)

Context type	Area 2			Area 3			Area 4			Head of conveyor			Area 5			Total		
	% no. cxts	% no. sh	% wt	% no. cxts	% no. sh	% wt	% no. cxts	% no. sh	% wt	% no. cxts	% no. sh	% wt	% no. cxts	% no. sh	% wt	% no. cxts	% no. sh	% wt
Unknown	4.5	0.8	1.7				0.3	0.2	0.1							0.3	0.2	0.1
US	-						0.1	2.1	2.3				-	0.3	0.3	0.1	2.0	2.6
Topsoil etc				1.2	0.1	0.3	0.1	0.1	+							0.2	0.1	+
Layer				2.4	6.5	9.7	6.0	15.7	11.9							5.5	14.8	11.3
Surface							0.9	0.5	0.4							0.8	0.5	0.4
Feature							0.2	+	0.1							0.2	+	0.1
Pit	18.2	2.8	4.5	27.7	8.2	17.9	54.8	52.3	58.7	52.4	95.4	98.7	22.9	22.2	27.1	52.5	49.7	56.8
Posthole	9.1	13.8	15.7	1.2	+	+	2.9	0.7	0.6							2.8	0.8	0.6
Well etc				4.8	6.2	10.5	1.7	0.8	1.0				2.9	0.3	0.4	1.8	1.1	1.6
Grave							0.6	0.3	0.1							0.5	0.3	0.1
Ditch	45.5	57.3	52.5	56.6	77.6	60.1	28.1	25.5	22.7	47.6	4.6	1.3	62.9	74.3	66.3	30.5	28.8	24.8
Gully	18.2	24.3	24.6	3.6	0.9	0.2	1.7	0.9	0.5							2.0	1.0	0.6
Hearth							0.1	+	+							0.1	+	+
Beamslot				2.4	0.4	1.2	0.6	0.1	0.1							0.7	0.1	0.1
Natural feature	4.5	0.8	1.0				1.8	0.7	0.7				11.4	3.0	5.9	1.9	0.7	0.7
Total	22	354	5133	83	2604	42850	1663	43281	587304	21	413	20868	35	334	2768	1824	46986	658823

The average figures for the site, inevitably heavily influenced by the pattern of the dominant Area 4 assemblage, show that a little over half the context groups containing pottery were from pits, with about 30% from ditches. The pottery from ditches was more fragmented, as might be expected; ditch contexts produced 28.8% of all sherds from SLGM but only 24.8% of the pottery by weight. Conversely, while pits contained just under half of all the sherds from SLGM these accounted for 56.8% by weight. A relatively significant proportion of the total pottery came from layers - a rather disparate group, but like the pottery from ditches this material was more important in terms of sherd count (14.8%) than weight (11.3%). Apart from poorly stratified material and that from unspecified or amorphous feature types other context groups present derived from surfaces, postholes, wells/waterholes, graves (including both inhumation and cremation burials), gullies, hearths, beamslots and natural features (particularly deposits in the top of tree-throw holes). While individual groups in these categories were of some importance none of them was substantial in aggregate; when combined they barely amount to 4% of the total weight of pottery from SLGM.

Several of these feature types - surfaces, graves and hearths, for example - were confined to Area 4, but it is notable that the groups from wells/waterholes and beamslots were better represented in Area 3 than elsewhere. Although the total quantities of material in such features in this area were small the absolute weight of pottery from beamslots, for example, was greater here than in the much larger Area 4 assemblage. In Area 2, pottery from gullies and postholes formed a particularly significant proportion of the assemblage (in total over 40% by weight), reflecting the importance of these features in the very early Roman settlement in this area.

The general characteristics of pit- and ditch-derived assemblages set out above are seen in Area 4, where pit groups were slightly more and ditch groups slightly less significant than the site average, but this pattern was not duplicated across the whole site - area to area variation in proportions of context group types containing pottery is evident and reflects the logic of the site plan. Thus it is only in Area 4 (and the rather anomalous Area 4E) that pit groups dominate the assemblage. While in other areas these groups conform to the established pattern in containing a higher proportion of the assemblage by weight than by sherd count, this proportion is only 27.1% in Area 5, 17.9% in Area 3 and a mere 4.5% in Area 2. In these three areas, ditches produced between half and two-thirds of all pottery (by weight) from a broadly equivalent proportion of context groups. In each case, ditch context assemblages outnumbered those from pits by more than two to one. Although the representation of pits in these areas was not insignificant, the importance of ditches, both as a dominant feature type in the more peripheral settlement areas and also/therefore as a place for the deposition of rubbish, is clearly established.

Comparable treatment of the data from DUGM (Table C.9.6) reveals some similarities in the patterning, but also some striking differences which in some cases are quite localised. In overall terms the proportion of the DUGM assemblage deriving from ditch contexts (roughly a quarter) is similar to that seen at SLGM, but the proportion of the assemblage deriving from pits was significantly lower, particularly in terms of quantities of material rather than numbers of context groups. The individual pit groups were therefore noticeably small - particularly in Area 9 where many of them were derived from the surfaces of fills of pits which were recorded in plan but remained unexcavated. Despite this, however, the general trend in which the mean weight of sherds in pit groups was consistently greater than in ditch groups, seen clearly at SLGM, was maintained here.

The most noticeable difference between the SLGM and DUGM assemblages overall, apart from the greater emphasis on pit groups at SLGM, is the importance in DUGM of context groups from layers and 'unstratified' deposits. Layer groups were particularly important in Area 2, where the presence of alluvial deposits had protected vertical stratigraphy from attrition by

post-Roman agriculture. Pottery was derived both from alluvial spreads and from underlying 'occupation' layers. Relatively very small numbers of ditches and (particularly) pits were examined in this area. Another characteristic of Area 2 was the occurrence of pottery context groups derived from walls. Features of this type were located in Trench 5 and more convincingly in Trench 7.

Sherds from layers in Area 2 and in Area 4 tended to be of below average weight, suggesting the effects of processes of redeposition and degradation through trampling. This was particularly noticeable in the Area 4 assemblage where the mean weight of sherds from layers was 10.4 g, only just over half of the mean for the area overall (20.1 g). This area also produced an unusually high proportion of 'unstratified' pottery, but much of this comprised material described as 'finds reference' - typically groups with no obvious feature association and probably also for the most part derived from poorly-defined layers. Ditch contexts were quite well-represented in this area (23.8% of context groups), but produced less than 10% of all the pottery from it.

In contrast, ditch groups dominated the assemblages from Area 6-8, amounting to just over 70% of the pottery from this area by weight. This assemblage was, however, highly fragmented, the mean sherd weight for the area being a mere 6.8 g. While this figure was depressed (artificially) by the presence of extremely fragmented sherds in a few grave contexts, the mean sherd weight from the ditches alone was still only just over 7 g. The peripheral location of this area in relation to the main focus of Roman settlement may in part explain these very low figures, the ditches here perhaps containing material that had been redeposited several times in the process of removal from more central locations.

Table C.9.6 DUGM distribution of pottery by context type in main excavated areas (Areas 10 and 17 omitted)

Context type	Area									Total					
	2			4			6-8						9		
	% no. cxts	% no. sh	% wt	% no. cxts	% no. sh	% wt	% no. cxts	% no. sh	% wt	% no. cxts	% no. sh	% wt	% no. cxts	% no. sh	% wt
Unknown	1.1	0.7	1.5										0.2	0.3	0.4
US	1.1	+	0.2	19.0	34.6	32.5	7.1	0.9	2.0	2.8	10.5	9.5	4.8	7.8	9.3
Topsoil etc	2.3	5.3	8.4				10.7	0.6	0.9				1.4	2.2	2.5
Layer	65.5	77.0	72.9	14.3	30.9	16.0	1.8	0.1	0.1	6.4	10.5	10.5	15.8	33.4	28.5
Surface	2.3	2.2	2.7							0.8	0.6	1.5	0.9	1.0	1.5
Feature										1.7	4.2	2.2	1.1	1.5	1.1
Pit	4.6	4.1	3.5	27.0	20.0	29.5	8.9	11.3	15.7	52.8	32.3	36.0	38.2	17.6	24.2
Posthole	2.3	0.4	0.2	9.5	0.9	0.3	1.8	0.1	+	1.1	0.3	0.2	2.3	0.3	0.2
Well etc	1.1	0.4	0.3							1.9	0.9	2.4	1.4	0.5	1.3
Grave				3.2	2.1	4.8	26.8	15.2	8.3	1.7	0.9	0.3	4.0	3.4	1.5
Ditch	10.3	4.6	5.5	23.8	7.2	8.5	39.3	68.0	70.5	29.8	39.1	36.4	27.1	29.4	26.4
Gully				3.2	4.3	8.3							0.4	0.5	1.1
Hearth	1.1	0.9	1.4				1.8	2.7	1.2				0.4	0.8	0.5
Wall	6.9	4.3	3.2										1.1	1.4	0.9
Natural feature	1.1	0.1	0.3				1.8	1.2	1.2	1.1	0.7	0.8	1.1	0.5	0.6
Total	87	2820	40052	63	913	18353	56	1564	10668	362	3076	69416	568	8373	138489

Pottery from burials

The data presented in Tables C.9.5 and C.9.6 include material from ten context groups in SLGM Area 4 derived from burials or possible burials, producing a total of 139 sherds weighing 853 g, and 285 sherds (2012 g) of pottery from 23 burial-related context groups at DUGM. Amongst the SLGM material the only certain grave good was SF 5252 from context 6922, a fill of the inhumation burial chamber (6876) within ring ditch 6952. This was a cup imitating samian ware form 33 in a local oxidised fabric (O30). The vessel is in poor condition and is apparently incomplete, but it is unclear at present if this reflects the state in which it entered the grave or subsequent disturbance.

SF 5840 is the base (in 20 fragments, 59 g) of a colour-coated ware beaker (F50, probably not an Oxford product) from the fill (10117) of cremation burial 10116. This is quite likely to have been a grave good, the incomplete state of the vessel being consistent with the truncated nature of the feature.

Cremation burial 5921 produced three sherds (39 g) of a rim in shell-tempered fabric C11 from the lower fill (5923) and two sherds (59 g) of samian ware from the upper fill (5922). The latter were from different vessels, one of form 36 and the other a dish of uncertain form. The very incomplete nature of these pieces makes it uncertain if they originally related to the burial or were incidental occurrences in its fill.

The remaining 74 sherds (581 g), from six contexts, are from mixed groups which seem almost certain to reflect material incidentally incorporated in grave fills rather than deposited as grave goods.

In DUGM grave-related context groups were present in all the main areas except Area 2 to the south. Two vessels in Area 4 (1990 excavation) were certainly associated with burials. These were a reduced coarse ware (R30) medium mouthed jar used as a cremation urn in context 3520, and a miniature jar, also in fabric R30, which was probably an ancillary vessel in cremation grave 3003. Two further ancillary vessels were associated with inhumation burials in Areas 6-8. These were a small jar in fabric O37 from evaluation context 26 in Trench 15 and a pentice-moulded beaker, probably in eroded Oxford colour-coated ware and certainly in a form (Young 1977 type C27) consistent with this repertoire, of late Roman date, from context 37 in Trench 26. The status of the sherds in two further contexts (40 and 41) in Trench 15 is uncertain, as preservation is poor, but the latter group included several sherds of a carinated bowl in fabric R10. The type would be an unusual one for a grave good, but is not impossible as such. Other groups both in this area and in Area 9 seem to represent incidental components of grave fills.

Statement of potential

The combined assemblage, as already indicated, is one of the largest of Roman or late Iron Age-Roman date from the Upper Thames Valley region. Larger assemblages are known from Claydon Pike (Fairford) and Abingdon Vineyard, but only 35, 000 sherds (430 kg) of the Claydon Pike assemblage were recorded and reported in detail (Green and Booth 2007) while the Abingdon Vineyard assemblage has never advanced beyond a preliminary (unpublished) assessment stage. Other large assemblages from the Upper Thames region include one from Ashton Keynes (Wilts), which again has seen only superficial assessment by Wessex Archaeology, while the largest fully recorded and reported assemblage is that from Alchester, comprising almost 37, 000 sherds (546 kg) from a total assemblage of 46, 500 (Evans 2001). Very large groups have been excavated at the roadside settlement of

Wilcote (Hands and the nearby villa of Shakenoak, both to the north of Gill Mill, but with the exception of a small sample from Wilcote excavated by Cotswold Archaeology there is no meaningful quantification of any of this material, which makes it of minimal analytical value. Earlier excavations, such as the 1950s and 60s work on the villa site at Roughground Farm, Lechlade (Green 1993), involved discard of unknown (but probably substantial) numbers of sherds and so are also of no value for comparative analysis. Even at Cirencester, the principal Roman settlement of the region, the number of substantial well-quantified assemblages is small and, even setting aside variations between them in quantification techniques which present problems for consistent interpretation (Cooper 1998), cumulatively they fall well short of the Gill Mill total, while the most consistently recorded group of these assemblages, from St Michaels Field, has never been published in detail (*ibid.*, 324).

Apart from the sites already mentioned there are a further eight or nine Upper Thames Valley sites with assemblages in a range from c 5000-13, 000 sherds, and only one other (Cotswold Community; Biddulph 2010) larger than this, with just over 21, 000 sherds (202 kg), while there are many more excavated sites which have produced groups ranging from a few hundred to two or three thousand sherds. In a regional context, therefore, the Gill Mill assemblage is almost unparalleled in terms of size, and its value in this respect is enhanced in that a relatively high proportion of the total assemblage is securely stratified. More than 80% (by sherd count - more by weight) of the pottery from SLGM derives from identifiable contexts, that is to say those that are not unstratified, uncertain, or from general layers or natural features, although even some of these deposits had good stratigraphic integrity and produced significant groups (such as layers associated with Road 2). While the proportion of such contexts from DUGM was rather higher, again some of these deposits (particularly layers associated with structures in Area 2) were archaeologically significant and their component pottery will merit detailed examination.

The pottery is clearly critical for the dating and phasing of individual features and the site as a whole. In addition it can be used to inform questions relating to the trade links enjoyed by the inhabitants of the site, in terms of their use of local, regional and extra-regionally derived pottery. Gill Mill is particularly well-placed geographically for analysis of the pottery to shed light on the relationship between the Oxford and 'west Oxfordshire' industries, and the assemblage is of sufficient size for it to be possible to clarify issues concerning the nature and chronology of the colour-coated wares that appear not to have derived from the Oxford industry (and were perhaps 'west Oxfordshire' products), as well as the more general question of the apparently reduced importance of the fine ware products of the Oxford industry in this part of the county, a problem highlighted at Asthall (Booth 1997, 134).

The pottery data can provide information about functional characteristics of, and variation within, the site. The unusually high incidence of fabric O81 at this site has been noted above, and further analysis will enable the detailed distribution of this distinctive ware to be examined and its significance for the economy of the site clarified. For example, a preliminary examination of this using non-quantified date shows that three of the five largest groups of pottery dominated by sherds of O81 are associated with a single enclosure in the centre of SLGM Area 4 (perhaps coincidentally this is the same enclosure that sees a concentration of religious material - two carved stone pieces and two of the three Venus figurine fragments) - the other groups are in Phase 1 Area 4 and in the Phase 2 working area east of Area 4. In more general terms the scale of the excavation permits examination of

spatial variation of selected fabrics and vessel forms, which may shed further light on functional as well as chronological differences in patterns of activity across the settlement. Variation in assemblage size and composition in relation to feature type may also be revealing, and it is important that analysis of such aspects should take account of other categories of material, both bulk finds (such as ceramic building material) and small finds as well as animal bone and charred plant remains, in order to produce a rounded view of the nature of deposition of cultural material.

The pottery will also be a critical tool for assessing the wider character of the site within the context of the regional settlement pattern. The local basis for this line of analysis has already been laid down (Booth 2004) and the Gill Mill evidence can therefore be compared with a substantial body of existing data, enhanced by more recent work (eg Booth 2007). Some of the principal comparative sites have already been mentioned. The preliminary assessment (above) suggests a site of middling status on ceramic criteria, on which basis its most useful comparators are likely to be the small towns/roadside settlements of Alchester and Asthall and the more substantial rural settlements - ie with a potential nucleated component - such as Claydon Pike. Looking further afield, the large assemblage from Site 2 at Kingscote (Timby 1998) is also likely to be relevant for comparative purposes. Consideration of the Gill Mill assemblage in these terms will enable the site to be placed more securely in its regional settlement framework and will enable better understanding of the extent to which it is consistent with or differs from other key settlements in the area.

Proposals for further work

A very large proportion of the total assemblage needs to be recorded in detail in order that the potential of the material can be properly realised. Pottery from the less useful types of context (see above) - uncertain, unstratified, topsoil and natural feature - will not be recorded. For the assemblage from DUGM Area 6-8 the pottery from graves and pits is more important than that from ditches and the latter will only be scanned again if this is necessary as a result of analysis of the pottery from graves in this area. By these means the total of material to be examined is reduced by some 3275 sherds.

The DUGM assemblage to be recorded in detail is therefore c 6435 sherds

For SLGM the relatively small assemblages from Areas 2, 3, 4E (Head of conveyor) and 5 need to be recorded in full (excluding context type groups mentioned above) both to provide data for purposes of comparison with the large Area 4 assemblage as a means of enabling functional comparison and also because of the variations in chronological range between these areas - including the fact that most middle-late Iron Age and early Roman (1st century AD) activity is concentrated here.

C.10 Ceramic building materials

Ruth Shaffrey

Summary and quantification

A total of 94 fragments of CBM were recovered from the DUGM (Phase 1) work and 724 from SLGM. There were no major observable differences in nature between the two groups. The material is almost entirely of Roman date.

Table C.10.1: Quantification of ceramic building material

Site Code	Area	OA number	No. fragments	Wt (g)	Box numbers
DUGM 1988	2	-	22	1707	BM.01
DUGM 1989	17	-	1	21	AF.02
DUGM 1990	4	-	33	1532	BM.01
DUGM 1995	6-8	-	2	182	BM.01
DUGM 1997-9	9	189, 287, 330	36	2405	BM.01, MISC.01, MISC.02
DUGM subtotal			94	5847	
SLGM 04	3	867 + 921	7	310	MISC.02, MISC.03
SLGM 04	Head of conveyor	867 + 921	1	33	MISC.03
SLGM 05-09		1059, 1175, 1183, 1248, 1320, 1379, 1492	716	38, 210	BM.01-BM.09, MISC.04, MISC.06-MISC.08, MISC.14
SLGM subtotal			724	38, 553	
Total			818	44, 400	

Methodology

The assemblage was quickly scanned in order to determine the condition of the material and, in broad terms, the tile types represented. Fabric types were not assessed at this stage although brief notes of variability were made (see below). The material was quantified by fragment count and weight per context.

Condition

The assemblage is highly worn and contains a significant quantity of small undiagnostic fragments. Some tegulae and imbrices were observed and a very small number have the potential to provide original dimensions, but these make up the minority of the overall assemblage. Some of the material bagged as CBM is probably fired clay. Owing to time restrictions, not all of this material was separated at assessment stage, but conversely CBM originally bagged with fired clay has been extracted and is taken into account in the figures presented above. A small proportion of the assemblage is burnt.

Fabric

The assemblage contains a variety of fabric types. These include a high proportion of poorly mixed fabrics demonstrating significant lamination and pelley inclusions. Most of these are also very sandy. Particularly sandy fabrics are characteristic of the medieval and post-medieval periods in this area and material of this date was noted in context 93/1 in Phase 1 Area 2 (including a fragment of encaustic tile) and a post-medieval brick context 3122 in Phase 1 Area 4 (together these pieces amounted to 17% of Phase 1 CBM by weight). Other fabric types represented are shelly and/or chalk tempered. A few fragments contain significant coarse quartz inclusions. These characteristics may suggest some local production. It is possible that tile in pink grogged ware - a fabric also used for pottery (O81) - was present at the site, but no fragments in this fabric were positively identified at this stage as being of CBM rather than pottery.

Form

The assemblage mainly consists of small fragments of indeterminate form although identifiable types include roof tile of both tegula and imbrex form. At least three tegulae with surviving flanges are present; these are all of type E (in the OA CBM recording typology, with a curved inner edge). Only one piece of combed possible box flue tile was identified amongst the SLGM material but several fragments were present in DUGM Area 2. No tile was recovered with signature marks, although the fragmentary and worn nature of the assemblage probably means that signature marks would not have survived. A fragment from a large imbrex in SLGM context 6657 has incised zig-zag decoration at one end. One piece of tile has a hand print on one side but no other marked tiles have been observed during the assessment. Two or three ceramic tesserae were present in DUGM Area 4, where they were associated with larger numbers of fine limestone tesserae.

There are more recognisable imbrices than tegulae and these will need to be examined for potential use as ridge tiles. Ceramic ridge tiles may have been used in conjunction with roof-stones rather than tegulae and thus the ceramic building material assemblage must be considered alongside the stone roofing and their chronological occurrences studied.

Statement of Potential

The assemblage of ceramic building material has some potential to add to our understanding of the site. Particularly with relation to the types of buildings represented, for example, there is a lack of evidence for box flue tile (except in DUGM Area 2) and the types of heating structures associated with these tiles. Integrated study of the ceramic and stone roofing evidence also has the potential to inform about the methods of construction being used in the structures represented by the assemblage. However, most of the material is heavily worn (the mean fragment weight for both DUGM (excluding post-Roman material) and SLGM is almost identical, at c 54 g); and will need to be related to the contexts and phases from which it was recovered in case it does not relate to structures on site. The spatial and chronological distribution of the material will be significant helping to distinguish between on-site structural use and other uses - such as the exploitation of re-cycled material in smaller features such as hearths and ovens. Quantification and analysis of the distribution of burnt CBM can also be used to examine these questions.

Recommendations for further work

The assemblage will need to be fully recorded, including assigning all pieces to type categories, weighing and measuring of any surviving dimensions. A fabric series should be created and all specimens assigned to fabric types. If time needs to be saved, the fabric analysis could concentrate on the fragments that can be assigned to type (not the indeterminate fragments). All this information will need to be entered into a ceramic building material database. A few samples of the different fabric types should be extracted and retained for future reference; these will be identified and categorised using a x10 magnification hand lens. Fragments deemed to be of little potential in terms of fabric or type analysis should be marked as being available for discard (any discard policy will need to be discussed with the receiving museum). One or two unusual fragments (such as the decorated imbrex in SLGM context 6657) will require illustration.

C.11 Fired clay

Paul Booth

Quantities and methodology

Some 1170 fragments (c 11,700 g) of fired clay were scanned rapidly for the assessment, and constitute an estimated 90-95% of the total material from Gill Mill. About 28% of the material (by fragment count, only 20% by weight) came from Phase 1 areas, with the remainder from Phase 2 (Table C.11.1). The Phase 1 material included 26 undiagnostic fragments (194 g) from the middle Iron Age enclosure in Area 10, but apart from this and a few small fragments from the north-east corner of Phase 2 (SLGM) Area 3 all the fired clay was from contexts of Roman date. The material is quantified in terms of fragment count and weight by context (data in archive).

Table C.11.1: Summary quantification of fired clay by site area

Site/Area	No. fragments	Wt (g)	Comment
DUGM Area 2	5	305	
DUGM Area 6-8	260	1051	
DUGM Area 9	35	797	
DUGM Area 10	26	194	MIA contexts
SLGM Area 3	123	903	Some from MIA contexts
SLGM Head of conveyor	1	127	
SLGM Area 4	720	8296	
Total	1170	11, 673	

Fabrics and forms

The fired clay was notably lacking in diagnostic characteristics. All the fragments were in one of two broad fabric groups, the first containing fine sand and sparse to moderate quantities of calcareous inclusions and pebbles, typically of limestone gravel, up to c 12 mm in length. This fabric was typically oxidised and was generally not highly fired. The second fabric was typically harder, irregular or partly reduced in firing, and contained fewer sand and calcareous inclusions. Sparse inclusions of organic material were characteristic. The occurrence of the two fabrics was not quantified systematically, but fabric 1 was the more common.

A large majority of fragments in both fabrics, but particularly in fabric 1, were amorphous. Pieces with a single roughly smoothed surface were more common in fabric 2, and more distinctive pieces were confined almost entirely to this fabric, the only exception being a small fragment in fabric 1 from Phase 2 Area 3 context 5038, of early Roman date, which appeared to have a single rounded wattle impression. Fabric 1 is likely to have been used for structural purposes - in the walls of buildings and ovens, for example, in a way that will have left little obvious trace in the friable extant material. Possible or probable structural pieces in fabric 2 consisted of an uncertain block from context 29/4 of DUGM Area 2 Trench 3, and fragments of a pierced block, with one small oblique hole and the edge of a larger opening, from DUGM Area 9 context 909. The latter piece may have been from the floor of an oven. A few fragments had part of a straight edge (SLGM contexts 5157 and 7008 from Areas 3 and 4 respectively) but these were too small for the original

form and function of the object to be defined. The most distinctive pieces in fabric 2 were from rough discs, a type of object encountered quite widely in the Upper Thames Valley, particularly in the early Roman period. Their function is uncertain, although an association with food preparation is likely (Booth and Simmonds 2009, 85, 87 with refs). Fragments of this object type were present in contexts 6306 and 7985, but were also noted amongst the pottery in 13 contexts from SLGM (all Area 4) and one from DUGM Area 9. These, however, were mostly in shell-tempered or coarse grog-tempered fabrics more closely akin to recognised pottery fabrics, and will need to be examined alongside the fired clay fabric 2 pieces in subsequent work.

Assessment of potential

As with the pottery, it is notable that the material from the more marginal areas of the site - DUGM Areas 6-8 and 10 and SLGM Area 3 - is more fragmented than that from areas closer to the heart of the settlement. Even in the latter, however, the degree of fragmentation is such that, as already indicated, few pieces can be assigned even to broad functional categories. Moreover, the total quantities of material, given the overall scale of examination of the site, particularly in SLGM Area 4, are extremely modest, and its potential to shed significant light on aspects of life in the Roman period at Gill Mill is correspondingly limited. Further detailed work for much of the assemblage is therefore not justified.

Further work

The structural pieces and disc fragments (from a total of four contexts in DUGM and six contexts in SLGM) need to be recorded in terms of fabric and form and discussed in functional terms in more detail. The overall distribution of the material can be analysed using the data already gathered. Three or four pieces will require illustration.

C.12 Waterlogged wood

Damian Goodburn

Introduction

Some 150 pieces of 'waterlogged' wood from Gill Mill were rapidly examined. The project producing the woodwork has extended over a period of more than 20 years, as a consequence of which it was acknowledged that some of the historic woodwork lifted and held at OA stores was not in good condition and that its archaeological value might be limited (see below).

In other cases recording was required as no details had yet been recorded. Copies of original field records, mainly in the form of deposit context sheets, often with sketch plans and section drawings were supplied by OA. The great majority of the material was thought to be of Roman date.

Condition of the lifted woodwork and samples

It is clear from field records that much of the material was lying in deposits which had undergone much relatively recent drainage initiating substantial decay. This decay has truncated the tops of the vertical elements and created a corrugated finish on the almost entirely oak assemblage. It would appear that much of the material had already been infested with fungi and other decay causing organisms on-site. The already poor condition of some of the material, added to the adverse consequences of long term storage, has resulted in many pieces of worked wood turning to peaty dust, or a core of corrugated heartwood surrounded by frass.

Only in less than 20 cases were slight traces of original toolmarks and surfaces found intact. In most cases any joints or fastenings had disappeared, as had the vast majority of the decay prone sapwood. A very high proportion of the worked wood assemblage was clearly of oak (ie one of our two natives or their hybrid). As the heartwood of this species often outlives most other wood this is at least partially a factor of the decay-prone circumstances on-site and possibly in storage. However, some material which was clearly still very waterlogged when excavated and had been well double bagged did survive in moderate condition with sapwood intact since 1988. However, in some of these cases the timber had the consistency of soft cheese all the way through. In c 15% of cases the material had dried out completely, resulting in much warping and shrinkage.

Implications of the condition of the worked wood

Clearly the decay of the timber and roundwood surfaces in over 95% of the lifted material means that the archaeological usefulness of it is limited. The lack of tool marks, jointing and fastening details makes broad dating on technological grounds very difficult. The lack of sapwood and often some heartwood tree rings means that any tree-ring dates obtained will be much less accurate than is often the case, though they may still be of use. The woodwork will also appear substantially smaller in scantling if it was excessively decayed or had undergone rapid drying.

Where the material is no more than dust, peat or a few distorted fragments no further recording can reasonably be warranted; this applies to the vast bulk of the assemblage. However, in the latter cases the bagged material may still be useful for low precision radiocarbon dates. In a few cases site records of decayed timber

structures can also be extended by being able to allocate species to material preserved only as site records.

Despite the condition of the vast majority of the material there are decayed oak structural timber that must have importance for reconstructing historic activity at the site and a small number of portable items of woodwork of considerable importance (see below) .

Methodology

Archaeological work in the London region and elsewhere in Britain has provided first hand knowledge, for this writer, of extensive quantities of well preserved waterlogged wood from Bronze Age to recent date. The brief comments supplied here are supported by that extensive experience. The bagged material was opened, briefly cleaned and scanned and an annotated list of all of it provided. Only if the bag contained nothing but peaty dust was it not opened.

The bags were then lightly closed pending confirmation of which might be needed, if any, for radiocarbon sampling. During the scanning procedure it was clear that a proportion of the material would warrant further detailed specialist recording on timber sheets with sketches and or measured drawings. A smaller number of pieces were also noted as being probably suitable for tree-ring study, and even fewer for species sampling.

Quantification of the scanned material

Number of individual bags of worked wood cleaned and scanned = 159

Number of individual items of worked wood briefly examined = 219

Number of items justifying further detailed recording = 43 (c 10 to be drawn to scale on gridded film)

Number of items providing tree-ring samples = 19

Number of items suggested for retention for possible conservation = 2 dry, 3 wet

Number for species identification =3

The key groups of worked wood and slight technological hints of dating can be briefly summarised. The largest group of material has to be acknowledged as 'amorphous fragments with peat' closely followed by 'very small distorted fragments'. Nevertheless there is some material of more interest and a small number of rare items.

The next largest group consists of decayed, earth-fast post bases of oak, often apparently cleft timber. Some of the latter could be well matched in early medieval assemblages elsewhere but a rustic or native context in the Roman period cannot be ruled out (and is much more likely here). A small number of rather square structural timbers and square sawn off cuts of oak look Roman in character. Some of this material may provide dateable tree-ring sequences. The small number of planks are all too decayed to provide diagnostic tool marks. Some may have been sawn, some split or 'cleft' out; so in terms of technology they are early medieval or rustic Roman in character, or clearly classical Roman or later medieval when saws were used. A group of cleft oak stakes could also be rustic Roman or early medieval or later (they could be radiocarbon dated). Some of the site records also

provide information worthy of more study such as the well frame plan of Roman form (SLGM Area 4 feature 4559; these timbers were very decayed at the time of lifting and have not survived - an attempt to obtain a dendrochronological date from them shortly after lifting was unsuccessful).

Apart from off cuts, including one squared oak beam with a dovetail housing cut in it, several items of portable worked wood stand out. These are a double sided comb, a rare segment of a spoked wheel with an oak felloe, two decorative sections of spindle turnery, and a jointed cleft oak board that may be half a toilet seat. The latter's form, jointing and treenails look more early medieval in character than of any other date range.

Assessment of the archaeological importance of the assemblage

In terms of condition, the assemblage has to be described as predominantly very poor with a few items in moderate condition. In terms of size, on a national scale the assemblage has to be seen as only small to medium sized due to the high proportion of small fragments. Only the wheel fragments, spindle turnery and possible toilet seat could be classified as of probable national importance. The structural woodwork is probably of local importance after refinement of site phasing and confirmation of dating.

Potential for further work

The structural woodwork, mainly earth fast post bases and cleft oak stakes, are key evidence of settlement activity and probably the subdivision of land, intrinsic to the site story and to local archaeology and history as a whole. The reconstruction of building types may be possible to some extent following analysis and phasing of clear plan evidence and the specialist timber records together.

The wooden 'small finds' such as the rare wheel parts and turned spindles are worthy of full study, description and publication in their own right. This also applies to the jointed probable toilet seat board and the double sided comb as well.

Proposals for further work

Further specialist work on this assemblage will include the completion of the detailed timber records and sampling of the 43 items worthy of that effort.

The woodwork specialist will correlate information on the timber with detailed site phase plans, and samples for dating can then be selected and sent off for analysis. Once dating results are obtained and phasing finalised the analysis of the worked wood can be completed, with c 10 draft figures.

C.13 Leather

There are nine pieces of leather from DUGM and c 65 from SLGM contexts. They include a shoe from a pit in DUGM Area 9. It has not been possible to complete the assessment of this material within the timeframe of the present project. This assessment report will be submitted in April 2011. It is likely that work further to the assessment will be required, but only notional costs for this have been put into the task list for the present.

C.14 Fibre basket

Part of a woven basket (SF 5834) in a semi-waterlogged state was recovered from fill 10143 of feature 10141, a late Roman pit located close to the north side of Road 2 in SLGM Area 4. Although incomplete, a large portion of the basket survives. It is small, perhaps originally c 150 mm high, and is finely woven of a vegetable (grass-like) fibre. The basketry itself consists of a stake-and-strand technique where a passive element is interwoven by an active element. It is not clear whether the strands and stakes are from the same species of vegetable fibre. An internal clay 'lining' may have been deliberately placed. The base of the basket has been burnt, and there is a burnt ?resinous deposit on the exterior in this area.

The basket has been conserved (at York Archaeological Trust's conservation laboratories) and is in a stable, if fragile, condition. It requires detailed specialist examination to determine the origin of the fibres, to identify parallels if possible, and perhaps to explore the nature of the burnt deposits on the base.

C.15 Metalworking debris: a note

Paul Booth

Some 10.2 kg of slag and probable slag were recovered from all the phases of work at Gill Mill. Of this a mere 117 g (4 fragments) came from DUGM contexts (one piece from Area 6-8 and the rest from Area 9), with the remainder from SLGM (Table C.14.1).

Table C.14.1: quantification of metalworking debris

<i>Site/Area</i>	<i>No. contexts</i>	<i>Weight (g) of slag</i>	<i>Contexts with hammerscale</i>
DUGM 6-8	1	5	
DUGM 9	3	112	
SLGM 3	12	503	2
SLGM working area	3	1140	
SLGM 4	63	10,297	16
SLGM 5	2	147	1
		12,204	

The slag assessment could not be completed by the end of February 2011 owing to the absence of the specialist abroad. A rapid scan to produce the quantification above suggests that relatively little of the material is particularly diagnostic of specific metalworking processes. A few fragments may relate to copper alloy working, while a majority is ferrous in character. Hammerscale, indicative of iron smithing, was found in soil sample residues from a number of contexts in SLGM areas, but the quantities in any one context were not large (maximum 22 g and in most cases less than 10 g).

Overall, the material is indicative, at best, of low level metal working within the excavated areas and is likely to add relatively little to understanding of the site as a whole, although analysis of the distribution of the slag may suggest characteristics of activity and refuse disposal patterns.

It is proposed that the specialist assessment should be completed as soon as possible. In view of the small quantities of material this will form the basis of the publication report, with a small amount of additional work to examine phase and distribution data once these are refined.

APPENDIX D. ASSESSMENT OF ENVIRONMENTAL EVIDENCE

D.1 Human bone

Angela Boyle

Introduction

This document presents results of the assessment of the human remains which comprise inhumation burials, disarticulated unburnt bone and deposits of cremated bone recovered from several phases of archaeological investigation. All the material is believed or demonstrated to be Roman in date. The assessment makes use of data collected and some limited analysis undertaken previously by Ceridwen Boston, Sharon Clough, Louise Loe and Peter Hacking.

Methodology

The human remains were examined to determine the quantity, general condition, completeness, provenance, date and nature of the material, all of which was examined in accordance with national guidelines for producing assessment reports (Mays *et al.* 2002).

Results

Cremated bone

Three very small deposits of cremated bone from Phase 2 (SLGM06) were identified as animal (5066, 12005 and 12009). Details of these should be incorporated into the animal bone report. A total of 18 deposits weighed less than 5 g and nothing was identifiable (Phase 1 (DUGM95) 25/35 and 40; Phase 2 (SLGM06) 5070, 5471, 6445, 8019, 8397, 8418, 8461, 8492, 8500, 8539, 8552, 8558, 8678, 10120, 12004, 12007). Details which appear here will be included in the catalogue. A further four Phase 2 deposits (SLGM06 10450, 10485, 107770/10771, 10921) are also insubstantial and require only a brief catalogue entry.

Deposits 217, 219, 223 and 225 from the Phase 2 Working Area (SLGM01) were fully recorded at an earlier stage and no further work is recommended (see Table D.1.1 for details). Details will be incorporated into the catalogue.

A total of 19 cremation burials per se will be fully analysed, 9 from Phase 1 Area 4 (DUGM90 3003, 3016, 3102, 3520, 3521, 3522, 3523, 3524, 3525), 5 from Phase 1 Area 6-8 (15/42, 26/31, 26/56, 26/57 and 26/64) and 5 from Phase 2 Area 4, (SLGM06 5272, 10117, 10234, 10779, 10952). These deposits range in weight from 89-1053 g. They are notable for a general absence of material from the lower sieved fractions, ie 4-2 mm and below. All are adult, and two deposits have so far been identified as possibly male (Phase 1 3525 and Phase 2 10117). The colour of

all the deposits is mixed indicating variable, possibly inefficient oxidisation. Deposit 3016 also contained a burnt maxillary cow molar.

Only one of the cremation burials was urned. It may be of interest that the largest burial, 5272, with 1053 g of cremated bone, was not urned.

Table D.1.1: Cremated deposits

Site code	Context type	Cremation no.	Wt (g)	Unsorted wt (g)	Age	Sex	Colour	Identifiable bone	Recommendation
DUGM90	Unurned	3003	287		Adult	?	Mixed	Skull vault, long bones	Full analysis
DUGM90	Unurned	3016	451		Adult	?	Mixed	Skull vault, long bones, vertebrae, upper cow molar burnt, 1 pig tooth possibly burnt	Full analysis
DUGM90	Unurned	3102	320		Adult	?	Mixed	Skull vault, long bone	Full analysis
DUGM90	Urned	3520	323		Adult	?	Mixed	Skull vault, long bones, 1 unburnt cow tooth and 1 unidentified unburnt fragment of animal bone	Full analysis
DUGM90	Unurned	3521	316		Adult	?	Mixed	Skull vault, tibia, femur	Full analysis
DUGM90	Unurned	3522	686		Adult	?	Mixed	Skull vault, long bone, 1 cow tooth, 1 horse tooth, unburnt	Full analysis
DUGM90	Unurned	3523	365		Adult	?	Mixed	Skull vault, petrous, long bone	Full analysis
DUGM90	Unurned	3524	89		Adult	?	Mixed	Skull vault, long bone	Full analysis
DUGM90	Unurned	3525	493		Adult	M?	Mixed	Skull vault, radius, ulna, tibia	Full analysis
DUGM95	Roman, recorded as hearth	Tr 15/4 sk 25/35	2		?	?	White	Nothing identifiable	Catalogue entry
DUGM95	Urned	Tr 15 sk 40	3		?	?	White	Nothing identifiable	Catalogue entry
SLGM01	Unurned	217	36	207	Adult	?	White	Skull vault, long bone	Catalogue entry
SLGM01	Unurned	219	4	8	Adult	?	White	Long bone shaft	Catalogue entry
SLGM01	Unurned	223	122	1169	Adult	M?	White	Skull vault, femur, miscellaneous long bone shaft	Catalogue entry
SLGM01	Unurned	225	2	1024	?	?	White	Long bone	Catalogue entry
SLGM06	Unurned	5066	> 1		?	?	Mixed	Animal	No further work

Site code	Context type	Cremation no.	Wt (g)	Unsorted wt (g)	Age	Sex	Colour	Identifiable bone	Recommendation
SLGM06	Unurned	5070	> 1		?	?	White	Nothing identifiable	Catalogue entry
SLGM06	Unurned	5272	1053		Adult	?	White	Skull vault, long bone	Full analysis
SLGM06	Roman, recorded as a pit	5471	> 1		?	?	White	Nothing identifiable	Catalogue entry
SLGM06	Roman 'quarry pit' with possible cremation deposit as uppermost fill	6445	> 1		?	?	Mixed	Nothing identifiable	Catalogue entry
SLGM06	Roman recorded As a pit	8019	> 1		?	?	Mixed	Nothing identifiable	Catalogue entry
SLGM06	Roman oven	8397	> 1		?	?	Mixed	Nothing identifiable	Catalogue entry
SLGM06	Roman, pit fill	8418	1		?	?	White	1 long bone fragment	Catalogue entry
SLGM06	Roman pit fill	8461	> 1		?	?	Blue-grey	Nothing identifiable	Catalogue entry
SLGM06	Roman clay surface	8492	> 1		?	?	Mixed	Nothing identifiable	Catalogue entry
SLGM06	Roman, fill of gully beam/slot	8500	> 1		?	?	Blue-grey	Nothing identifiable	Catalogue entry
SLGM06	Roman, ditch fill	8539	> 1		?	?	Mixed	Nothing identifiable	Catalogue entry
SLGM06	Roman, ditch fill	8552	> 1		?	?	Mixed	Nothing identifiable	Catalogue entry
SLGM06	Roman, ditch fill	8558	> 1		?	?	White	Nothing identifiable	Catalogue entry
SLGM06	Roman pit	8678	1		?	?	White, blue-grey	Nothing identifiable	Catalogue entry
SLGM06	Late Roman unurned cremation	10117	168		Adult	M??	White, blue-grey	Skull vault, long bone	Full analysis
SLGM06	Roman, fill of grave 10120	10120	3		?	?	Mixed	Nothing identifiable	Catalogue entry
SLGM06	Roman unurned cremation	10234	630		Adult	?	Mixed	Skull vault, long bone	Full analysis
SLGM06	Roman, layer	10450	13		?	?	White, blue-grey	nothing identifiable	Catalogue entry

Site code	Context type	Cremation no.	Wt (g)	Unsorted wt (g)	Age	Sex	Colour	Identifiable bone	Recommendation
SLGM06	Roman, fill of grave 10484	10485	9		?	?	Very mixed	nothing identifiable	Catalogue entry
SLGM06	Roman unurned cremation	10770/10771	19		Adult	?	White, blue-grey	skull	Catalogue entry
SLGM06	Roman, unurned cremation	10779	745		Adult	?	Mixed	Skull vault, long bone	Full analysis
SLGM06	Roman unurned cremation	10781	19		Adult	?	White, blue-grey	Nothing identifiable	Catalogue entry
SLGM06	Roman, unurned cremation	10921	14		?	?	Charred, blue-grey	Nothing identifiable	Catalogue entry
SLGM06	no context record	10952	89		Adult	?	White	Skull vault, long bone	Full analysis
SLGM06	Roman pit	12004	> 1		?	?	Blue-grey	nothing identifiable	Catalogue entry
SLGM06	Roman pit	12005	6		?	?		animal	No further work
SLGM06	Roman ditch fill	12007	2		?	?	White	nothing identifiable	Catalogue entry
SLGM06	Roman pit	12009	> 1		?	?		animal	No further work

Inhumation burials

A total of 33 inhumation burials were excavated, 20 from Phase 1 areas and 13 from Phase 2. Skeletons 4632 and 4660 (From Phase 2 Area 4) have already been fully recorded. Fragmentation of the material was generally high, bone surface condition poor, and completeness always less than 70% (see Table D.1.2).

Table D.1.2: Context and condition of the inhumation burials

Site code	Skeleton no.	Date	Completeness	Preservation	Condition	Fragmentation
DUGM90	3130=3131	Roman	1	1	5	high
DUGM90	3526	Roman	1	1	5	high
DUGM95	Tr. 15/4. Skeleton 25/35	middle Roman, hearth	1	1	5	high
DUGM95	Tr 15 skeleton 24	Roman, decapitated, cuts grave 15/5	3	1	5	high
DUGM95	Tr 15, skeleton 25	Roman, cut by grave 15/23	2	1	5	high
DUGM95	Tr 15 skeleton 26	Roman	1	1	5	high
DUGM95	Tr 26 skeleton 40	Roman	1	1	5	high
DUGM95	Tr 26 skeleton 30	Roman	1	1	5	high
DUGM95	Tr 15 skeleton 29	Roman	2	2	5	high
DUGM95	Tr 15 skeleton 37	Roman	1	2	5	high

Site code	Skeleton no.	Date	Completeness	Preservation	Condition	Fragmentation
DUGM95	Tr 26 skeleton 26/27	Roman pot sf 23	1	1	5	high
DUGM95	Tr 26 skeleton 36	Roman, pot sf 22	1	1	5	high
DUGM97	267	Roman, spread of charcoal and bone in natural hollow	1	1	5	high
DUGM98	378	Roman	1	2	5	high
DUGM98	382	Roman	1	1	5	high
DUGM98	700	middle Roman	3	2	3	Medium
DUGM98	756	late Roman	3	2	3	low
DUGM99	990	Roman	2	2	3	medium
DUGM99	992	Roman	2	2	3	medium
DUGM99	1304	Roman	3	2	3	Medium
SLGM04	4259	Roman, within square ditched enclosure	1	1	5+	high
SLGM05	4400	primary fill of r ditch	1	4	3	low
SLGM05	4632	Roman, cut 2nd century ditch 4842	2	2	1	high
SLGM05	4660	Cut 2nd c ditch 4842	1	4	1	high
SLGM06	6535		1	1	5	high
SLGM06	8545	Roman, nr building 8371	1	1	5	high
SLGM06	8547	Roman, nr building 8371	2	2	5	high
SLGM06	8549	Neonate, within building 8371	1	1	5	high
SLGM06	9726/9725	Roman	1	1	5	high
SLGM06	9840	Roman	2	2	3	medium
SLGM06	10119	Roman	2	5	5	high
SLGM06	10395	Late Roman, dug into lr ditch	2	5	5	high
SLGM06	10423	Roman	1	1	5	high
SLGM07	6881	2nd c, within ring ditch 6892	2	2	3	medium

Age and sex

It has been possible to assign all but one of the skeletons to a preliminary age category. There are 3 neonates (8545, 8547, 8549), 5 young adults (Tr 26/ sk 40, Tr 15/ sk 29, Tr 26 sk 26/27, 700, 6535), 5 prime adults (378, 756, 990, 9840, 6881), 4 mature adults (382, 992, 1304, 4259), 6 ageing adults (Tr 15/sk 24, Tr 26/sk 36, 267, 4632, 4660, 9726/9725) and 9 adults aged upwards of 18 years (3130=3131, 3526, Tr 15/4 sk 25/35, Tr 15 sk 26, Tr 15 sk 37, 4440, 10119, 10395, 10423). Estimation of sex has been attempted for 19 adult individuals (see Table D.1.3).

Table D.1.3: Age, sex and stature of the inhumation burials

<i>Site code</i>	<i>Skeleton no.</i>	<i>Age</i>	<i>Sex</i>	<i>Stature</i>
DUGM90	3130=3131	Adult (18+ y)	?	No
DUGM90	3526	Adult (18+ y)	?	No
DUGM95	Tr. 15/4. sk 25/35	Adult (18+ y)	?	No
DUGM95	Tr 15 sk 24	Ageing adult (45+ y)	M	No
DUGM95	Tr 15, sk 25	Prime adult (25-35 y)	F	No
DUGM95	Tr 15 sk 26	Adult (18+ y)	?	No
DUGM95	Tr 26 sk 40	Young adult (18-25 y)	?	No
DUGM95	Tr 26 sk 30	?	?	No
DUGM95	Tr 15 sk 29	Young adult (18-25 y)	M	No
DUGM95	Tr 15 sk 37	Adult (18+ y)	M??	No
DUGM95	Tr 26 sk 26/27	Young adult (18-25 y)	M??	No
DUGM95	Tr 26 sk 36	Ageing adult (45+ y)	M	No
DUGM97	267	Ageing adult (45+ y)	?	No
DUGM98	378	20-30 y	M	No
DUGM98	382	30-40 y	F?	No
DUGM98	700	Young adult (18-25 y)	F	1.57 m
DUGM98	756	Prime adult (25-35 y)	M	1.7 m
DUGM99	990	Prime adult (25-35 y)	?	No
DUGM99	992	Mature adult (35-45 y)	M?	No
DUGM99	1304	Mature adult (35-45 y)	M??	1.63 m
SLGM04	4259	Mature adult (35-45 y)	?	No
SLGM05	4400	Adult (18+ y)	F	No
SLGM05	4632	Ageing adult (60+ y)	F	No
SLGM05	4660	Ageing adult (60+ y)	M	No
SLGM06	6535	Young adult (18-25 y)	F??	No
SLGM06	8545	Neonate (36 wks-1 month)	n/a	n/a
SLGM06	8547	Neonate (36 wk-1 month)	n/a	n/a
SLGM06	8549	Neonate (36 wks-1 month)	n/a	n/a
SLGM06	9726/9725	Ageing adult (45+ y)	?	No
SLGM06	9840	Prime adult (25-35 y)	F??	Yes
SLGM06	10119	Adult (18+ y)	?	No
SLGM06	10395	Adult (18+ y)	?	No
SLGM06	10423	Adult (18+ y)	?	No
SLGM07	6881	Prime adult (25-35 y)	M	No

Metric and non-metric analysis

The level of fragmentation means that it is possible to calculate stature for only four of the adults. The potential for any metric analysis is very limited particularly in relation to the skulls. Meric and cnemic indices can be calculated for a small number of adults. Bone surface condition will also limit the level of non-metric analysis.

Table D.1.4: dental and skeletal pathology

<i>Site code</i>	<i>Skeleton no.</i>	<i>Dental pathology</i>	<i>Skeletal pathology</i>	<i>Comment</i>
DUGM90	3130=3131	No	No	
DUGM90	3526	Dentition absent	No	
DUGM95	Tr. 15/4. sk 25/35	Caries, attrition	No	see cremes
DUGM95	Tr 15 sk 24	Severe attrition, ante-mortem tooth loss	Osteophytes	
DUGM95	Tr 15, sk 25	Caries	No	
DUGM95	Tr 15 sk 26	Dentition absent	No	
DUGM95	Tr 26 sk 40	Caries	No	
DUGM95	Tr 26 sk 30	Dentition absent	No	
DUGM95	Tr 15 sk 29	No	Osteophytes on patella	
DUGM95	Tr 15 sk 37	No	No	
DUGM95	Tr 26 sk 26/27	Caries, ?unusual wear; ?notched surface	No	unwashed
DUGM95	Tr 26 sk 36	No	No	
DUGM97	sk 267	No	No	
DUGM98	sk 378	Caries, attrition, ante-mortem tooth loss	No	
DUGM98	sk 382	Caries	No	
DUGM98	700	Caries	Cribra orbitalia, button osteoma	
DUGM98	756	Caries; ante-mortem tooth loss	Schmorl's nodes, osteophytes, fractured left fibula; tibio-fibular synostosis; degenerative change to ankle; r elbow osteophytes; degeneration of acromioclavicular joint, 12th costo-vertebral, osteophytic spur on left medial condyle of femur (myositis ossificans?)	dog and sheep present
DUGM99	990	Dentition absent		coffin wood
DUGM99	992	Ante-mortem tooth loss	No	
DUGM99	1304	Ante-mortem tooth loss, marked attrition	Slight osteophytic lipping of lumbar facets and 1st metacarpal heads	
SLGM04	4259	Dentition absent	No	iron staining, preserved wood
SLGM05	4632	Dentition absent	Exostosis on left humerus	
SLGM05	4660	Caries, calculus, agenesis, heavy wear, alveolar resorption	Two healed midshaft right rib fractures, osteophytes, schmorl's nodes, eburnation; ?bladder calculus - benign prostate enlargement, thickened skull	Ossified thyroid
SLGM06	6535	Enamel hypoplasia	No	
SLGM06	8545	Dentition absent	No	
SLGM06	8547	No	No	
SLGM06	8549	Dentition absent	No	
SLGM06	9726/9725	Dentition absent	No	

<i>Site code</i>	<i>Skeleton no.</i>	<i>Dental pathology</i>	<i>Skeletal pathology</i>	<i>Comment</i>
SLGM06	9840	Calculus, periodontal disease, caries, ante-mortem tooth loss	No	
SLGM06	10119	Dentition absent	No	
SLGM06	10395	Calculus, caries, enamel hypoplasia	No	
SLGM06	10423	Dentition absent	No	
SLGM07	6881	Calculus, periodontal	Scoliosis (very poorly preserved vertebrae, difficult to tell without reconstruction, sharp force trauma through left mastoid, osteophytes	Barrow burial, wooden chamber/coffin, 2nd century, cup, possible chicken bones

Dental pathology

A total of 21 adult inhumations had surviving dentition and of that number 16 exhibited dental pathology including caries, advanced or unusual attrition, ante-mortem tooth loss, calculus, agenesis of 3rd molars and periodontal (gum) disease.

Skeletal pathology

A minimum of nine individuals exhibit skeletal pathology including trauma in the form of fractures, possible myositis ossificans (soft tissue trauma), joint disease, a benign neoplasm and cribra orbitalia. The sharp-force traumatic cut through the left mastoid of the skull of skeleton 6881 is almost certainly peri-mortem and will be recorded in full.

Disarticulated bone

Three fragments of disarticulated bone have been recovered (Phase 1 Area 9, 687; Phase 2 Area 2, 141; Phase 2 Area 4, 4400, SF 19). The first two are both skull vault fragments from adults, one of whom appears male (141).

The fragment from context 4400, the basal fill of a late Roman enclosure ditch towards the western side of Phase 2 Area 4, has already been recorded in full. It comprises the frontal bone of a probably young adult female. Modifications include a single circular perforation, micro-striations and linear fractures. All of the modifications have features that are consistent with a green bone response to fracture and are thus peri-mortem. The bevelling associated with the perforation is strong evidence that the incision was created by a force delivered from the inside out, not the outside in. This gives a clear indication that the perforation was created after the individual had died. More precise timing of these modifications cannot be determined, the period in which bone may retain its elasticity being from anything between approximately five hours after death to several weeks following death, depending on the environmental conditions in which the bone is kept (Maples 1986; Kanz and Grossschmidt 2006).

The absence of associated radiating fractures and the neatness of the perforation are consistent with a fast loading force delivered perpendicular to the bone surface (Gurdjian et al. 1949; Berryman and Haun 1996; Byers 2005). Possible agencies include: a nail used during modern excavation, a high velocity projectile or a drill.

Soil conditions and the shallow nature of the burial context mean that it is highly unlikely that the green properties of the bone would have been retained. If a nail had hit this cranium, the expected response would, therefore, be that of mineralised bone - fragmentation and a lesion with rough margins - which is clearly not the case here. High velocity projectiles, consistent in size and shape with the incision are not known from the Roman period. This therefore eliminates this second possibility. However, drills, both surgical and craft working, are a possibility, being both common for this period and the correct size and shape to create the neat perforating lesion described here.

The linear fractures do not bear any distinctive features (for example, striations and polishing) that would associate them with bladed instruments, although both are incomplete. In the absence of further evidence, these are more likely to be radiating fractures that may be associated with an insult delivered elsewhere on the cranial vault before the individual died, a deliberate modification created on the cranium sometime shortly after death, or peri-mortal accidental damage to the bone.

The micro-striations may be cut marks made with a bladed instrument, or they may be the result of sediment abrasion, particularly given the silty clay and gravel in which the bone was found. Sediment abrasion may be differentiated from cut marks based on the location of marks and the fact that they tend to curve, are of uneven thickness and depth and lack internal micro-striations (Blumenschine and Selvaggio 1988, 764-765; Olsen and Shipman 1988, 543). Present observations are inconclusive and require further examination using scanning electron microscopy (SEM).

Skulls were drilled in the Roman period as a form of surgical intervention to excise diseased tissue or remove foreign objects from bone. However, in the present example, surgery can be ruled out owing to the fact that it was performed after the individual had died (the location and nature of the perforation are also inconsistent with any medical condition that would have required this type of modification).

That this cranial bone has been deliberately selected, modified and curated is a more likely explanation. The classical writers such as Strabo, Diodorus and Livy, who all describe head-taking from around the first century BC/AD, indicate that the deliberate selection of skulls is not uncommon for this period.

That skulls were selected as trophies following war is not the only explanation for their treatment. Boylston et al. (2000) on decapitation in Roman Britain, and Cunliffe (1984) on the selection of Iron Age skulls, suggest that their treatment may have also been motivated by factors such as veneration and relic collection. However, while these may explain why the bone was selected and modified, they do not explain its unceremonious burial context. Presumably, by the time it was deposited, the significance it once held was forgotten or irrelevant.

No conclusions can be drawn at present regarding the interpretation of the micro-striations. However, their similarity to patterns observed on a male adolescent cranial vault of late second century date from St Albans (Mays and Steele 1996) supports the theory that these represent cut marks. In this example, the striations are also multi-directional and are not confined to a specific location, patterns that are believed to be consistent with defleshing whereby the objective is to retain the cranial bone (as opposed to scalping which results in more precise cut marks to ensure that the scalp is retained) (Mays and Steele 1996, 158). Evidence for defleshing lends further support to the interpretation that the present cranial bone had been curated.

Virtually no other cranial bones have been described in the archaeological or anthropological literature as having similar perforations to the one described here. Exceptions include the remains of a skull dating to the 4th century from Roissy-en-France which bore multiple drill holes (Aldhouse-Green 2001, 104). A cranial vault from an Iron Age Broch at Hillhead, Caithness, Scotland had been pierced with three holes and a late Iron Age cranium from the river Saône, France bears evidence for sword cuts and a square nail-hole (ibid.). These examples may have been hung up for display or perhaps attached to buildings, a tradition seen continuing into the Roman period. Examples of this are seen at Cosgrove, Northamptonshire, a shrine where parts of two human skulls had been set in a wall foundation (Quinnell et al. 1991, 21), and at Wroxeter where fragments of skulls bearing evidence for scalping, sharp-edged weapon injuries and decapitation were found in the dumps and levelling spreads in the nave area of the baths basilica (Wilkinson and Barker 1997, 368). A further characteristic of the Wroxeter fragments was that they appear to have been treated with oil. The Gill Mill fragment also had an unusual, glossy surface appearance which contrasted with that of most of the other bone from the site, and the possibility that this piece had also been treated with oils, perhaps to enhance its long-term preservation, should be considered.

Statement of potential

The preservation of human remains at Gill Mill is variable, and rarely good, but the evidence for burials forms an important part of the wider picture of settlement morphology and its development. No formal cemeteries have yet been identified at Gill Mill, and it is possible that they never existed here as such, in which case the more scattered evidence for burials represented by the human remains assessed here is of considerable significance. Characterisation of the burial population, within the limitations imposed by the condition of the material, will be vital in this regard. It may be noted that the sample includes a relatively high proportion of cremation burials compared to the majority of evidence from Upper Thames Valley sites of the Roman period, and that some of these are in quite good condition.

In addition, the assemblage includes bone from two burials of unusual intrinsic interest - one set within a small square-ditched enclosure and one in a chamber contained within a ring ditch of 2nd century AD. The latter individual possibly suffered from scoliosis but also had a sharp-force traumatic cut through the left mastoid of the skull, almost certainly a peri-mortem pathology; the combination of pathology and burial rite makes this individual of particular interest and importance. The modified skull fragment from Phase 2 Area 4 ditch fill 4400 has already been discussed extensively, but will repay further detailed work to confirm its special character, which may shed further light on the diverse range of religious/ritual practice for which there is evidence at Gill Mill.

Recommendations

Inhumations

It is recommended that all the inhumation burials not already analysed (ie 10 from Phase 1 and 11 from Phase 2 areas) should be fully recorded, though bearing in mind the general unsuitability of the material for metric and non-metric analysis. Age and sex estimations will be refined while dentition will be fully recorded along with any skeletal pathology present. The evidence for sharp-force trauma to the skull exhibited by skeleton 6881 is particularly noteworthy given the context of the

burial, confined within a barrow. SEM analysis of the sharp-force trauma to the skull of skeleton 6881 will be carried out. A sample of bone will be submitted for radiocarbon dating. All surviving bones will be systematically examined in order to identify any surviving pathological indicators. All results will be incorporated into the catalogue and presented in the final report.

Cremation deposits

It is recommended that a total of 14 deposits of cremated bone are worthy of further detailed analysis (9 from Phase 1 areas and 5 from Phase 2) and will be examined according to standard recommended practice (Brickley and McKinley 2004). A full report will be prepared.

Unsorted residues are associated with cremation deposits 216, 218, 222 and 224. These have already been scanned and it is unlikely that further information will be gained by sorting and examining the unsorted residues from these deposits.

Disarticulated bone

The cranial bone 4440, SF 19 is presently dated by its association with pottery recovered from the ditch in which it was found. Interpretations cannot be fully explored without a more secure date and, to this end, the bone will be sent for radiocarbon dating. Other work will involve SEM analysis of the striations to explore the interpretation that these were created with a bladed tool.

D.2 Animal bone

Lena Strid

Introduction

The animal bone assemblage from Gill Mill (DUGM88, DUGM89, DUGM90, DUGM97, DUGM98, DUGM99, SLGM03, SLGM04, SLGM05, SLGM06, SLGM08) consisted of an estimated 40968 fragments, of which 5313 fragments (13%) came from the residues of sieved soil samples. The assessment included 3235 re-fitted fragments from hand-collected contexts. A full record of the assessed assemblage, documented in a Microsoft Access database, can be found with the site archive.

Features from four periods contained faunal remains: mid Iron Age, early Roman, mid Roman and late Roman. There are also a considerable number of contexts which have not yet been phased in detail, but the great majority date to the Roman period. All phasing information used in this assessment is based on information provided by project officer Andy Simmonds.

Methodology

The bones were identified at Oxford Archaeology using a comparative skeletal reference collection in addition to standard osteological identification manuals, such as Cohen and Serjeantson (1996), Hillson (1992) and Schmid (1972). Approximately 10% of the total estimated number of bones were analysed for the assessment. All the animal remains were counted and weighed, and where possible identified to species, element, side and zone (Serjeantson 1996; Worley forthcoming). With the exception of skull and horn core fragments, no attempt was made at this stage to distinguish bones from sheep and goat. Instead all were classified as 'sheep/goat'. Long bone fragments, ribs and vertebrae, with the exception for atlas and axis, were classified by size: 'large mammal' representing cattle, horse and deer, 'medium mammal' representing sheep/goat, pig and large dog, and 'small mammal' representing small dog, cat and hare.

The general condition of the bones was graded on a 6-point system (0-5), grade 0 equating to very well preserved bone and grade 5 indicating that the bone had suffered such structural and attritional damage as to make it unrecognisable (Table D.2.1).

For ageing, mandibles with two or more recordable teeth (Grant 1982), cattle horncores (Armitage (1982) and fused and unfused epiphyses (Habermehl 1975) were noted. Sexable elements, ie cattle pelves, sheep/goat skulls and pelves, and pig canine teeth, were noted, using data from Boessneck et al. (1964), Prummel and Frisch (1986), Schmid (1972) and Vretemark (1997). Measurable bones were noted according to von den Driesch (1976).

The assessed assemblage derives from a variety of features (Table D.2.2), in order to prevent disposal representation bias. Studies have shown that Iron Age and Romano-British assemblages from southern England have a bias towards cattle bones in assemblages recovered from ditches, whereas assemblages from pits are dominated by sheep/goat bones (Rielly 2009, 206).

Table D.2.1: Bone preservation grading methodology

Grade 0	Excellent preservation. Entire bone surface complete
Grade 1	Good preservation. Almost all bone surface complete. No cracks in bone
Grade 2	Fair preservation.
Grade 3	Poor preservation. Most bone surface destroyed
Grade 4	Very poor preservation. No surface structure remaining
Grade 5	Extremely poor preservation. Unlikely to be able to identify element

Table D.2.2: Assessed number of animal bone fragments from Gill Mill, divided per excavation area and feature type

Site/Area	No.	Ditch, gully	Pit	Well	Water- hole	Layer, spread	Posthole, stakehole	Road makeup/ surface	Cremation burial
DUGM 9	54	32	21			1			
SLGM 3	163	163							
SLGM 4	2962	1202	1344	110	203	9	26	64	4
SLGM 5	56	18	38						
TOTAL	3235	1415	1403	110	203	10	26	64	4

Overview of the assemblage

The Gill Mill assemblage derives principally from a mid and late Roman settlement with surrounding field system, as well as from round house gullies, ditches and pits of middle Iron Age date and a small number of enclosure ditches from the early Roman period. The main Roman settlement includes excavation areas DUGM 2, 4 and 9 and SLGM Area 4. SLGM Areas 3 and 5 are situated in the outskirts of the settlement and may represent enclosures, possibly for livestock, whereas SLGM Areas 1 and 2 represent fields and pastures. The small excavation area DUGM 10 comprises a separate settlement of middle Iron Age date. Other middle Iron Age settlement was found in excavation area SLGM 3 and the early Roman (1st century AD) enclosures in SLGM 2.

Table D.2.3: Estimated number of animal bone fragments from Gill Mill, per phase and as total including fragments from as yet unphased features. Actual number of assessed re-fitted fragments within parantheses

Site/Area	MIA	ER	MR	LR	TOTAL incl. bones from not yet phased features
DUGM 2					800
DUGM 4					580
DUGM 9			22 (21)	19 (33)	1772 (54)
DUGM 10					190
SLGM 2					74
SLGM 3	18 (9)	46 (45)	85 (67)	624 (42)	942 (163)
SLGM 4	1 (1)		2829 (623)	24694 (2338)	35744 (2962)
SLGM 5			87 (56)		322 (56)
SLGM Head of Conveyor			26	203	544
Total	19 (10)	46 (45)	3049 (767)	25540 (2413)	40968 (3235)

Site/Area	MIA	ER	MR	LR	TOTAL incl. bones from not yet phased features

DUGM excavation areas

The total number of bones from DUGM Areas 2, 4, 9 and 10 is relatively small (Table D.2.3), since many features were either only examined during evaluation or only recorded in plan. The majority of the assemblage could only be dated to the Roman period in general, and was therefore not included in the assessment, although refinement of context dating is in many cases likely to be possible as a result of further analysis of stratigraphic sequences. A cursory examination of the as yet unphased excavation areas showed that most bones from DUGM Area 4 (mainly late Roman) and Area 10 (middle Iron Age) were in relatively poor condition and for the most part indeterminate to species. The bones from DUGM Area 2 (mainly late Roman), on the other hand, were in a fair condition and more bones were identifiable to species.

The small number of bones from the phased assemblage, all from Area 9, derives from cattle, horse, sheep/goat and pig (Table D.2.5). While the very small number of bones precludes further inter-species discussion (only 22 bones could be identified to taxon) this assemblage ought to reflect similar husbandry practices to those seen in the much larger SLGM assemblage.

A small number of the bones are potentially ageable. These include one cattle mandible (late Roman), one cattle radius (middle Roman), one cattle humerus (late Roman), one cattle phalanx 1 (late Roman) and one horse radius (late Roman). The late Roman assemblage also included one juvenile cattle humerus. Butchery marks were noted on one cattle metacarpal and one scapula, both from the middle Roman assemblage. One late Roman cattle mandible displayed minor pathological changes. The bones in the assemblage were too fragmented to be measured.

Table D.2.4: Preservation level for bones from all phases of the DUGM 9 assemblage

	<i>n</i>	0	1	2	3	4	5
Middle Roman	21		14.3%	57.1%	14.3%	14.3%	
Late Roman	33		33.3%	54.5%	12.1%		
TOTAL	54		25.9%	55.6%	13.0%	5.6%	

Table D.2.5: Identified species for all phases of the DUGM 9 assemblage

Species	Middle Roman	Late Roman	TOTAL
Cattle	8	9	17
Sheep/goat		1	1
Pig		1	1
Horse	1	2	3
Large mammal	5	9	14
Indeterminate	7	11	18
Total fragment count	21	33	54
Identifiable to species	9	13	22
Total weight (g)	587	1146	1733

SLGM

The assessed assemblage from SLGM Areas 3, 4 and 5 comprises a total of 3181 hand collected bones, mostly dated to the late Roman period. The Area 2 assemblage contained only a small collection of rather fragmented pieces and was not examined further at this stage. The sieved fragments were rapidly scanned, but were not recorded at this stage. Of the identifiable sieved bones, most were loose teeth and phalanges from livestock, as well as cranial and post-cranial elements from micromammals and amphibians. Notable bones from the sieved samples include one femur from domestic fowl, which came from the late Roman pit (7403) and one fragmented dog skull and mandible from the late Roman pit (6375).

The bone preservation is good to fair in all three excavation areas (Table D.2.6). While burnt and gnawed bones varied in frequency between the three assemblages (Table D.2.7), the relatively high frequency of these fragments in SLGM Area 5 is probably an anomaly caused by small sample size. The relatively low frequency of gnawing, excluding the assemblage from Area 5, suggests that butchery and kitchen waste was rapidly buried.

Table D.2.6: Preservation level for bones from all phases of the SLGM 3-5 assemblage

Area	<i>n</i>	0	1	2	3	4	5
SLGM 3	163	27.0%	17.8%	45.4%	9.2%	0.6%	
SLGM 4	2962	3.8%	41.3%	45.5%	6.9%	2.4%	
SLGM 5	56	3.6%	23.2%	50.0%	17.9%	5.4%	
TOTAL	3181	5.0%	39.7%	45.6%	7.2%	2.4%	

Table D.2.7: Gnawed and burnt bones from all phases of the SLGM 3-5 assemblage

Area	<i>n</i>	Gnawed bones	Burnt bones
SLGM 3	163	7 (4.3%)	
SLGM 4	2962	140 (4.7%)	21 (0.7%)
SLGM 5	56	8 (14.3%)	6 (10.7%)
TOTAL	3181	155 (4.9%)	27 (0.8%)

Table D.2.8: Identified species for all phases of the SLGM 3 assemblage

Species	Middle Iron Age	Early Roman	Middle Roman	Late Roman	Total
Cattle	1	5	10	2	17
Sheep/goat	2		1	2	5
Sheep	2				2
Horse	1		3	2	6
Dog				32*	32
Cat				1	1
Medium mammal	2	1		5	8
Large mammal	1	3	12	10	26
Indeterminate		36	21	8	65
Total fragment count	9	45	47	62	163

Identifiable to species	6	5	14	39	64
Total weight (g)	74	275	720	984	2053

* semi-articulated skeleton.

Table D.2.9: Identified species for all phases of the SLGM 4 assemblage

<i>Species</i>	<i>Iron Age</i>	<i>Middle Roman</i>	<i>Late Roman</i>	<i>Total</i>
Cattle	1	122	395	518
Sheep/goat		35	92	127
Sheep			5	5
Pig		9	36	45
Horse		8	44	52
Dog			7	7
Rabbit			1	1
Domestic fowl			11	11
Duck			4	4
Bird			3	3
Small mammal			2	2
Medium mammal		37	109	146
Large mammal		122	445	567
Indeterminate		290	1184	1474
Total fragment count	1	623	2962	3586
Identifiable to species	1	174	595	770
Total weight (g)	29	11115	40047	51191

Table D.2.10: Identified species for all phases of the SLGM 5 assemblage

<i>Species</i>	<i>Middle Roman</i>
Cattle	8
Sheep/goat	4
Pig	1
Horse	4
Medium mammal	12
Large mammal	7
Indeterminate	20
Total fragment count	56
Identifiable to species	17
Total weight (g)	1321

Table D.2.11 Identified species for all phases of the total SLGM 3-5 assemblage

<i>Species</i>	<i>Iron Age</i>	<i>Middle Iron Age</i>	<i>Early Roman</i>	<i>Middle Roman</i>	<i>Late Roman</i>	<i>Total</i>
Cattle	1	1	5	140	397	544

Sheep/goat		2		40	94	136
Sheep		2			5	7
Pig				10	36	46
Horse		1		15	46	62
Dog					39*	39*
Cat					1	1
Rabbit					1	1
Domestic fowl					11	11
Duck					4	4
Bird					3	3
Small mammal					2	2
Medium mammal		2	1	49	5	57
Large mammal		1	3	141	119	264
Indeterminate			36	331	453	820
Total fragment count	1	9	45	726	1246	2027
Identifiable to species	1	6	5	205	634	851
Total weight (g)	29	74	275	13156	41031	54565

* 32 fragments from one semi-articulated skeleton.

A total of 851 animal bones (42%) were identifiable to species (Table D.2.8-11). The assemblage is dominated by domestic mammals, primarily cattle, sheep/goat, pig and horse. Other taxa present in small numbers include dog, cat, rabbit, domestic fowl and duck. The assemblage also included one semi-articulated dog skeleton from ditch (5170). While rabbit was occasionally brought to Britain by the Romans, there is no evidence for a long term breeding population of rabbit in Britain until the Anglo-Norman period (Sykes 2007a, 81-83). The single rabbit bone is therefore likely to be intrusive. A predominance of domestic animals is common on Roman rural sites, but the duck bones probably represent wild ducks, since there is no evidence for duck breeding in Britain until the post-Roman period (Albarella 2005).

Viewing the assessed SLGM assemblage as a whole, and assuming that the species ratio is representative for the entire site, the data suggests that the animal bone assemblage would merit further analysis, in particular it would be possible to investigate slaughter age patterns for late Roman cattle and to limited extent for sheep/goat (Table D.2.12). These animals are particularly interesting since it should be possible to distinguish rearing focussed on meat or on secondary products such as dairy or wool. An increase in older sheep during the late Roman period, tentatively linked to a rise in wool production, has been evidenced from a number of rural and urban sites (Maltby 1987; Maltby 2010, 289).

The limited data for pig and horse suggests that they follow common slaughter patterns, ie pigs were slaughtered young for meat, whereas horses were used as working animals and slaughtered when they were old.

Data for dog and birds include one dog humerus suitable for withers' height calculation as well as one egg-laying hen, both from late Roman features (Table D.2.12).

Butchery marks and pathologies were only noted in the mid and late Roman assemblages (Table D.2.13). They occurred on bones from cattle, sheep/goat, pig, horse and domestic fowl, as well as indeterminate medium and large mammal. The majority of butchery marks were noted on cattle bones, indicating disarticulation, skinning and portioning. Previous studies on

butchery in Roman Britain have included comparison of urban and rural butchery and at Gill Mill the cattle butchery data in particular would be a valuable addition to the dataset for rural settlements. The butchery marks on two horse bones suggest marrow extraction. Horse appears to have been eaten occasionally in many Iron Age settlements (Maltby 1981, 184) but they were not normally eaten in Roman Britain (Grant 1989, 145). The potential for the use of horse marrow in Gill Mill is interesting and needs to be considered for future studies.

Pathologies were present on bone of cattle, horse and dog (Table D.2.13). Most suggest degenerative wear on hips and limbs of cattle and horse, indicating the use of these animals as beasts of burden. One horse hoof with probable laminitis is present in the mid-Roman assemblage.

Table D.2.12: Number of mandibles and bones in the SLGM 3-5 assemblage providing ageing, sexing and measuring data

	<i>Middle Iron Age</i>	<i>Early Roman</i>	<i>Middle Roman</i>	<i>Late Roman</i>	<i>Total</i>
Ageable mandibles	1		5	24	30
Ageable bones		1	38	152	191
Ageable horn cores			9	21	30
Sexable bones			5	13	18
Measureable bones			6	45	51

Table D.2.13: Number of contexts in the SLGM 3-5 assemblage containing bones with butchering marks and/or pathological conditions

	<i>Middle Roman</i>	<i>Late Roman</i>	<i>Total</i>
<i>Butchery marks</i>	15	49	64
<i>Pathologies</i>	3	12	15

Recommendations

Roman settlements are common in Oxfordshire and the Upper Thames Valley and many of these show continuous settlement from the late Iron Age if not earlier (cf Mulville *et al.* forthcoming; Strid 2010). In the early 2nd century there was a widespread settlement disruption in the area. While some sites displayed few changes, others were abandoned or were transformed spatially (Booth *et al.* 2007, 43-52). Large bone assemblages in the region mostly derive from sites that either were abandoned at this time or had a continuous settlement from the Iron Age throughout the Roman period (cf Levine 2004; Mulville *et al.* forthcoming; Strid 2010; Sykes 2007b). Gill Mill is unusual in that the earliest major phase of the settlement is mid Roman, earlier remains mainly comprising separate minor settlements and enclosures. Gill Mill would thus represent a substantially new settlement, possibly connected to the use of flood plain pastures for cattle grazing and/or breeding. Indeed, the low-lying location next to the river Windrush is very unusual for a Roman site in the Upper Thames Valley region; these are generally located somewhat further from the watercourses. Consequently the very large and well preserved Gill Mill Roman assemblage is particularly interesting and is recommended for further analysis. The ratio of cattle compared to sheep is larger than at any other site in the region - assuming that the species frequency in the assessed part of the assemblage is valid for

the assemblage as a whole - and indicates a focus on cattle husbandry, whether for dairy production, meat production or for breeding.

While the middle Iron Age and early Roman assemblages are small, they provide important comparative data for the middle and late Roman material and thus should also be fully recorded and reported. It should also be noted that further refinement of phasing of features may increase the numbers of animal bones from these periods.

The middle and late Roman assemblages will not only allow an analysis of species frequency, livestock slaughter age pattern, butchery and animal size for these periods, but will also provide sufficient data for a spatial analysis of waste management between feature types as well as between the main settlement area and the outlying parts, represented by excavation areas SLGM 3, SLGM 5 and SLGM Head of Conveyor. While the enclosures and pits in these areas only contain 773 and 87 bones from features which have been phased at this stage, further features are likely to be dated and this should increase the numbers of animal bones from these areas. Several pits in SLGM Area 4 contained large quantities of pottery, animal bone and small finds. An analysis of the rubbish within these may also reveal spatial patterning in waste disposal.

The faunal remains analysis should not take place until the pottery report and site phasing are completed: only securely phased bone should be recorded in full. It will not be necessary to fully record the sieved assemblage, due to the relatively small number of speciable bones. However, sieved samples from human burials should be fully recorded. Furthermore, all hand-collected contexts need to be scanned in order to retrieve any worked bones, fish bones or human bones.

The timings below are based on the full recording of all bones from presently securely dated features (n: 25477) and an estimated 50% of the currently unphased features (n: 6128). Note that securely phased bones that were fully recorded as part of the assessment have been excluded from the time estimate.

Time constraints may mean that not all of the bones can be recorded in full. If this problem arises, it is recommended that bones from a representative range of features and areas of the site are recorded, aiming to record approximately 70% of the bone in total. However, in order to increase the validity of the analysis, the remaining contexts should be scanned and ageable, sexable and measureable bones should be extracted, as well as bones with pathologies and noteworthy butchery marks.

D.3 Charred plant remains

John A Giorgi

Introduction

During excavations at Gill Mill, environmental bulk soil samples were collected for the potential recovery of biological materials including macro-plant remains. The following report is concerned with the assessment of charred plant material from areas of excavation lying within the parishes of South Leigh and Ducklington. This evidence may provide information on crop-husbandry and processing, the function of the sampled features and thus the spatial distribution of different activities across the settlement and possible changes in the character of the site over time. The samples were also assessed for the presence of identifiable charcoal fragments for information on woodland resources and management and fuel selection for domestic, economic and ritual use, including the Roman cremation burials.

Sampling, recovery and identification methods

A total of 221 environmental samples were selected for assessment; 165 samples (including eight charcoal samples) from 123 contexts were from the Phase 2 areas of excavation (SLGM06-8) with 114 samples being from Area 4 (central south-western area) and 51 samples being from Area 5 (south-eastern area of excavation). The other 56 samples (associated with 40 contexts) were from investigations in the Phase 1 area. There were also hand-collected plant remains, consisting mainly of a few large charcoal fragments from six deposits in Phase 2 (SLGM06). Samples which were not assessed for charred remains comprised those wet sieved for bone and artefact recovery and as well as samples processed only for the recovery of waterlogged remains (details are given in the assessment by Hunter, below).

The samples were collected from a range of feature types, with the most extensively sampled contexts being the fills of graves (both inhumations and cremations) (88 samples - although these were not taken principally for the recovery of charred plant remains), pits (50 samples), ditches (36 samples) and beam slots (22 samples). Twelve samples were from various layers (silt, clay, alluvial deposits) with two samples from both hearths and ovens/kilns and single samples from the fills of a posthole, pot and waterhole. Six samples were from undefined features.

Virtually all the selected samples from the Phase 2 areas of excavation were from contexts dating to the Romano-British period with just two samples from features belonging to the middle Iron Age. There were only two samples from early Roman (AD 43-120) contexts and 23 samples from features dated to middle Roman (AD 120-240) with the majority (76 or 46%) of the samples coming from the late Roman period (AD 240+) (although 23 were only tentatively dated as such). Another 53 samples were from contexts only broadly dated to Romano-British while the remaining nine samples were from undated features.

The majority of the 56 samples from the Phase 1 areas of excavation have yet to be securely dated but may be broadly assigned to the Romano-British period. One sample has been more closely dated to the middle Roman period (2nd century AD) and four samples to the late Roman period (3rd century AD).

The soil volumes of the selected samples ranged from 1-57 litres, with over 60% being ten litres or greater. Most of the samples smaller than ten litres were from grave fills. The samples were processed using a Siraf-style type flotation tank with mesh sizes of 0.25 mm and 0.5 mm for the recovery of the flots and residue respectively.

The residues were dried and sorted for biological remains and other archaeological material. The flots were also dried and measured, ranging in volume from under 1 ml to 2200 ml, although almost 73% were less than 100 ml. The flots were divided into fractions using a stack of sieves for ease of assessment and scanned using a stereo-binocular microscope, with a magnification of up to x40. Sub-samples of between 5% and 50% were taken for assessment from the smaller fractions (0.25 mm to 1.0 mm sieves) of the 55 largest flots.

The presence and relative abundance of charred grain, cereal chaff, wild plants/weed seeds and other charred plant remains, such as nutshell, pulses and fruits, was recorded, as well as the frequency of charcoal fragments larger and smaller than 2 mm, the larger pieces being potentially identifiable and suitable for analysis. The presence of uncharred botanical material, mainly seeds and fruits, was also noted, along with the abundance of other biological remains in the flots, which included bones, molluscs and insect remains.

The item frequency of the charred plant material and other environmental remains was scored using the following scale: + = <5 items; ++ = 5-25 items; +++ = 26-100 items; ++++ = 101-300 items; +++++ = >300 items. Recommendations for analysis were based on the size of the individual charred plant assemblages in terms of the number of identifiable items, with the following codes being used to define their potential: A = rich charred plant assemblages (containing more than 300 identifiable items); B = good assemblages (between 100 and 300 identifiable items); C = moderately good remains (between 50 and 100 identifiable items); D = poor assemblages containing fewer than 50 and usually fewer than ten items); and F (unproductive flots with no identifiable charred plant remains). Provisional identification of the charred botanical remains was carried out during assessment although without direct comparison to reference material and seed reference manuals. Nomenclature follows that of Stace (1997).

A number of potentially identifiable charcoal fragments (greater than 2 mm) with breaks showing the transverse sections were selected from the larger charcoal assemblages; an attempt was made to assess samples from a range of feature types and different phases of the site although this was not always possible because selection was based only on samples with existing breaks. The selected charcoal fragments were rapidly scanned using a magnification of up to x40 and tentative identifications made, although these may only be considered provisional; at the analysis stage the radial and tangential sections will also be examined.

There follows a general discussion of the results and then a breakdown by area and phase, followed by an assessment of potential and recommendations for further analysis, based on the quantity and quality of the individual charred plant assemblages.

Results

The flot assessment results are presented by phase for SLGM and DUGM in Tables D.3.1 and 2 respectively. These tables show the frequency of the different biological remains in the individual flots and comments on individual sample assemblages, including provisional identifications of the plant materials. The results from the assessment of the hand-collected botanical remains from SLGM are given in Table D.3.3.

Identifiable charred plant remains were present in 115 or just over half of the assessed flots; 83 of the productive samples were from the SLGM areas of excavation while 32 flots with identifiable charred plant remains were from DUGM. The quantity and quality of the material, however, was limited, with the bulk (102) of the productive samples (including all those from DUGM) containing only occasional or small amounts (D) of identifiable remains. From SLGM, six flots contained rich (A) charred plant assemblages, two samples produced good amounts

(B), and five samples had moderately good-sized assemblages (C). Ninety-eight flots produced no identifiable charred botanical remains.

Variable amounts of charred cereal grains were present in 110 flots with moderately rich and rich assemblages in 11 samples. Wheat (*Triticum* sp.) and barley (*Hordeum vulgare*) were the main cereal grains found in the samples. There was a good representation of hulled wheat, emmer/spelt (*Triticum dicoccum/spelta*) and to a lesser extent free-threshing wheat (*T. aestivum* type) in the flots, while the better preserved barley grains showed the presence of six-row hulled barley. There were also very occasional tentative identifications of naked barley. Oat (*Avena* sp.) grains were also noted although it is not possible at this stage to establish whether these were from cultivated and/or wild species. Cereal chaff was present in 48 flots, with seven samples containing large amounts of material; this consisted largely of hulled wheat chaff including glume bases, spikelet forks and rachis fragments, and confirmed the presence of spelt (*T. spelta*) and to a lesser extent, emmer (*T. dicoccum*). There were very occasional rachis fragments belonging to barley and rye (*Secale cereale*), and awn fragments of oat and wheat/barley. Cereal debris was also represented by possible cereal straw (culm nodes/internodes) and loose coleoptiles (detached from sprouting grains).

Other identifiable charred plant material was present in 55 flots which included seven moderately rich and rich assemblages, although species diversity was limited in most cases. The bulk of these remains were from wild plants/weeds although there were a few food plants, with a tentative identification of lentil (cf. *Lens culinaris*) in one sample. Some of the indeterminate legume seeds (*Vicia/Lathyrus/Pisum* sp.) may also belong to cultivated pulses. The residues of potential wild food resources included hazel nut (*Corylus avellana*) and *Prunus* shell fragments. The majority of the weed seeds are probably from arable weeds incidentally harvested with the cereals, including stinking chamomile (*Anthemis cotula*), very common in the samples, corn cockle (*Agrostemma githago*), black bindweed (*Fallopia convolvulus*), knotgrass (*Polygonum aviculare*), scentless mayweed (*Tripleurospermum inodorum*), cleavers (*Galium aparine*), wild radish (*Raphanus raphanistrum*) and bromes (*Bromus* sp.). There were also plants associated with wetland habitats, for example sedge (*Carex* sp.), spike-rush (*Eleocharis* sp.) and/or grassland environments, for instance, buttercup (*Ranunculus* sp.), ribwort plantain (*Plantago lanceolata*), self-heal (*Prunella vulgaris*) and various grasses including onion couch grass tubers (*Arrhenatherum elatius*).

Potentially identifiable charcoal fragments were present in 174 or 78% of the samples, with moderately rich and rich assemblages in 83 samples or just under half of this total. The material included round wood, with scanning of selected samples showing provisional identification of ash (*Fraxinus* sp.), oak (*Quercus* sp.), alder/hazel (*Alnus/Corylus avellana*) and Pomoideae (hawthorn, apple, pear etc.).

Uncharred plant remains were present in 195 or 88% of the flots, although most of these assemblages consisted of only occasional or small numbers of seeds and are probably intrusive. Forty-seven flots, however, contained larger amounts of uncharred seeds, mainly from ditch and pit fill samples. In such instances where there is also high species diversity it is possible that the material may be contemporary with the sampled features and shall be noted in the discussion of results below.

There was a high species diversity and range of habitats represented by uncharred seeds, with plants of disturbed (including cultivated) ground and waste places being well represented, the most common being oraches/goosefoots etc (*Atriplex/Chenopodium* spp.), common nettle (*Urtica dioica*) and various knotweeds (Polygonaceae); others included fumitory (*Fumaria* sp.), corn cockle, swine-cress (*Cornopus squamatus*), chickweeds (*Stellaria media*), field penny cress (*Thlaspi arvense*), fool's parsley (*Aethusa cynapium*), henbane (*Hyosyamus niger*) and black nightshade (*Solanum nigrum*). There was also a fairly good range of wetland (including

aquatic) taxa, for example, pondweed (*Potamogeton* sp.), duckweed (*Lemna* sp.), stonewort (*Chara* sp.), crowfoots (*Ranunculus* Subgen *Batrachium*), celery-leaved crowfoot (*R. sceleratus*), yellow iris (*Iris pseudacorus*), marshworts (*Apium* sp.), sedge and rush (*Juncus* sp.). The latter two may also indicate grassland habitats, along with self-heal, buttercups, dandelion (*Taraxacum* sp.) and various indeterminate grasses. There was evidence of woodland/hedgerow/scrub vegetation, with *Prunus* species including sloe/blackthorn (*P. spinosa*) and plum/bullace (*P. domestica*), plus hawthorn (*Crateagus monogyna*), hazel, alder (*Alnus* sp.), elder (*Sambucus* sp.) and brambles (*Rubus* sp.); the remains of some of these plants may be the residues of gathered wild foods. Other uncharred plant material in the samples included variable amounts of fragmented wood in a small number of samples and occasional leaf, bud and stem fragments in a few flots.

Faunal remains in the samples included very fragmented bone including burnt material in 146 flots; most of this material was from the cremation samples but is probably not identifiable. It was present in only small quantities in most of the flots although 28 samples produced moderately rich amounts. Molluscs were noted in 102 samples, most of which, however, only contained occasional specimens, with the exception of 20 samples with moderately rich snail assemblages (although much of this material was fragmentary). Occasional insect (including beetle) fragments were recorded in 92 flots; these remains, however, may be intrusive.

There follows a discussion of the results by phase and area.

Middle Iron Age

SLGM

Just two samples from ring ditch fills [5060] (sample 5005) and [9144] (5122) were assessed from this period, one each from Area 3 and Area 4. There were only a few poorly preserved charred grains in sample 5005 and occasional identifiable charcoal fragments in both flots.

Early Roman

SLGM

Two samples from Area 3 were assessed from early Roman contexts; sample 5014 from a ditch fill [5155] contained traces of charred plant remains (grain, chaff, weed seeds) and a moderate number of uncharred seeds plus occasional identifiable charcoal fragments. The other sample, from ditch fill [5187] (5103), produced several pieces of identifiable charcoal including oak.

Middle Roman

SLGM

Twenty three samples were assessed from middle Roman features, two from Area 3, 16 from Area 4 and five from Area 5, from grave fills (seven samples), ditch and pit fills (six samples each), three clay layers and an oven fill.

Small amounts of identifiable charred plant remains were present in 12 of these flots in all the sampled context types except the grave fills, with one productive sample from Area 3, eight from Area 4 and three from Area 5. The material included occasional charred grain in all 12 flots, cereal chaff in seven, and wild plant/weed seeds in eight samples. Eleven of the 12 charred botanical assemblages were rated as poor (D) with only occasional or small amounts of identifiable material. The other sample, 20001 from pit fill [12005] (Area 5), produced a moderate sized charred plant assemblage (C), consisting mainly of cereal grains (albeit poorly

preserved), occasional chaff fragments and a moderate range of weed seeds including tubers of onion couch grass.

Potentially identifiable charcoal, including oak, ash and Pomoideae, was noted in 17 of the 23 flots, with moderate to good sized assemblages in the following 11 samples: from Area 4 in pit fills [5923] (5025), [8329] (5073); [10450] (5151), ditch fills [8897] (5123), [8397] (5125), clay layers [8490] (5096), [8492] (5097), [8494] (5098), and oven fill [8397] (5086); and from Area 5 in pit fills [12005] (12001) and [12875] (12875).

Uncharred botanical remains were present in virtually all the flots but with only good sized assemblages (more than 100 items) in seven samples, consisting primarily of material from wetland and disturbed/waste ground plants. Species diversity, however, was not great with the best assemblages being in ditch fills [8937] (5125) and [12763] (12501) from Areas 4 and 5 respectively. The other five samples were from clay layers [8490] (5096), [8492] (5097), [8494] (5098) and pit fill [10450] (5151), all from Area 4, and ditch fill [5027] (5000) from Area 3.

Other environmental remains in the middle Roman samples included occasional bone and insect fragments in 16 and nine samples respectively, and snail remains in 13 flots, with two good mollusc assemblages in ditch fills [5027] (5000) and [12763] (12501) from Area 5, although the snails in sample 12501 were very fragmentary.

DUGM

The one sample assigned to the middle Roman period from Ducklington was from a cremation fill [3520] but was virtually sterile in terms of botanical material, with no identifiable charcoal or charred plant remains.

Late Roman

SLGM

Seventy six samples were assessed from late Roman features, all from Area 4. The samples were from a range of features, mainly pit fills (27 samples), a beam slot (22 samples) grave fills (11 samples) and ditch fills (ten samples); five samples were from various layers with a single sample from the fill of a posthole.

Variable amounts of identifiable charred plant remains were found in 49 of these flots. The botanical material was mostly recovered from the fills of beam slots (Group 8371) (21 samples), pit fills (18 samples) and ditch fills (eight samples), with single productive flots from a layer and a grave fill. The remains included charred grain in 47 flots, cereal chaff in 29 and wild plant/weed seeds in 19 samples. Forty of the 49 flots, however, only contained occasional or only small amounts of charred botanical material, with less than 50 items (D). Just three samples produced rich (A) charred plant assemblages; from pit fills [6503] (5040), [8238] (5072) and [8418] (5082). These flots consisted of thousands of grains, albeit often poorly preserved, with mainly hulled wheat and hulled barley (including sprouted grains and loose coleoptiles) together with large amounts of cereal chaff and moderate to large numbers of weed seeds. Sample 5040 contained a possible lentil. Good assemblages (B) of charred botanical remains were present in two samples; in pit fill [8461] (5084), with large numbers of hulled wheat grain, occasional cereal chaff fragments and moderate quantities of weed/wild plant seeds; and in pit fill [6489] (5038), with large numbers of grain, predominantly of hulled wheat, occasional chaff fragments and small amounts of weed/wild plant remains including hazelnut shell. Moderate quantities (C) of identifiable charred botanical material were recorded in three samples, from beam slot fills [8386] (5080) (moderate numbers of grain and chaff fragments and a few weed

seeds) and [8561] (5108) with modest quantities of poorly preserved grain and chaff fragments; and ditch fill [8502] (5090) again with moderate amounts of poorly preserved grain and chaff fragments.

Potentially identifiable charcoal, including oak, ash, alder/hazel and Pomoideae, was present in 69 of the 76 flots, with moderately rich and rich assemblages in 36 samples. The good charcoal remains were mainly from pit fills; [5895] (5024), [5862] (5023), [6081] (5026), [6136] (5028), [6151] (5029), [6333] (5033), [6334] (5034), [6445] (5035), [6446] (5036), [6489] (5038), [6503] (5040), [6489] (5043), [7092] (5056), [7696] (5063), [7701] (5062), [7775] (5065), [8019] (5067), [8190] (5071), [8238] (5072), [8401] (5120), [8418] (5082), [8461] (5084), [9470] (5127) and [9471] (5126). The remaining rich charcoal assemblages were from ditch fills [8478] (5085), [8501] (5089), [8502] (5090), [8525] (5091), [8539] (5099), [8552] (5100) and [8558] (5105), beam slot fills [8386] (5080), [8559] (5106), [8561] (5108) and [8563] (5110), and layer [7403] (5060).

Uncharred plant remains were recorded in 68 of the late Roman flots with high numbers of seeds in 26 samples, predominantly from pit and ditch fills. This material was mainly from wild plants/weeds found in disturbed ground/waste places and wetland environments although there were a number indicative of woodland/ hedgerow/scrub vegetation, including the potential residues of plant foods, for instance, plum/bullace and sloe/blackthorn fruit stones, elder and blackberry/raspberry seeds, and hazelnut shell. Only seven of the 26 rich seed assemblages, however, contained evidence for a moderate or wide range of taxa; from pit fills [6151] (5029), [6333] (5033), [7696] (5063), [7999] (5068), [8116] (5069), [8190] (5071) and [8401] (5120). Most of these samples also produced large amounts of wood fragments while some contained bud fragments. Samples with high seed frequencies but lower species diversity were from the following contexts; pit fills [6136] (5028), [6489] (5038), [7701] (5062), [7775] (5065), [9471] (5126), ditch fills [8454] (5083), [8478] (5085), [8502] (5090), [8525] (5091), [8539] (5099), [8552] (5100), [8558] (5105), [8572] (5119), [8501] (5089), beam slot fills [8380] (5077), [8386] (5080), [8561] (5108), silt layer [7258] (5057) and alluvial layer [7262] (5058).

Other biological material in the late Roman contexts included fragmented bone in 55 flots, mainly represented by occasional or moderate numbers of fragments although with larger amounts in four samples; in grave fill [10394] (5162 and 5166), ditch fill [8552] (5100) and beam slot fill [8651] (5108). The bone, however, was generally poorly preserved and extremely fragmented and therefore is probably not identifiable. There were also occasional insect remains in 27 samples and molluscs in 46 flots mainly represented by a few specimens with moderate sized snail assemblages in four samples.

DUGM

Four samples from DUGM have already been phased to the late Roman period from three pit fills and the fill of a pot, in Areas 4 (three flots) and 9 (one sample). Two of the samples from Area 4 produced very small quantities (D) of charred plant remains and also identifiable charcoal. There was a small assemblage of grain and chaff (including hulled barley, spelt and possibly oat) and a few wild plant/weed seeds in pit fill [3005/C/4] (62) together with a large amount of identifiable charcoal including oak; traces of poorly preserved grain and a few wild plant/weed seeds were also noted in a pot fill [3019] (50) with occasional identifiable charcoal fragments. These four late Roman samples also contained small amounts of uncharred seeds in three samples and occasional bone, insect fragments and molluscs in two samples each.

Romano-British

SLGM

Fifty-three samples were assessed from features which are at present only broadly dated as Romano-British, with 53 coming from Area 4 and one each from Areas 3 and 5. The majority of these samples were from inhumation grave (28 samples) and cremation fills (11 samples), followed by pit fills (nine samples); three samples were recovered from clay layers with single samples from the fills of a ditch and waterhole.

Charred plant remains were present in 17 samples, in one flot from Area 3 and 16 from Area 4, with charred grain in 16, chaff in four and other wild plants/weed seeds in nine samples. This material was largely found in pit fills (seven samples) and cremation fills (six samples) with remains also in two layers and two grave fills. Thirteen of the 17 productive flots, however, only contained small amounts (D) of charred botanical material. There were however three rich (A) charred plant assemblages, all from Area 4 and all from pit fills; from [6484] (5039) rich in all three categories of material but particularly chaff fragments of hulled wheat; and from pit fills [6535] (5037) and [6703] (5027), which contained mainly grain and chaff and fewer weed seeds. Samples 5037 and 5039 also produced possible cereal straw and coleoptiles. There was also a moderate sized (C) charred plant assemblage, with grain and weed seeds, in cremation fill [10779] (5173) from Area 4.

Identifiable charcoal fragments were noted in 39 of the Romano-British samples, one from Area 3 and the rest from Area 4, including all the cremation fills. Moderately rich and rich charcoal assemblages were present in 15 of these flots with oak and ash being identified; from Tar Farm 4 in cremation fills [5272] (5015 spits 1, 2 and 3), [10117] (5148), [10234] (5150), [10779] (5173), [10781] (5174), [10921] (5175), pit fills [5726] (5020), [6353] (5037), [6703] (5027), [8678] (5126) and [10734] (5169) and clay layers [8521] (5094) and [8522] (5095).

There were variable quantities of uncharred wild plant/weed remains in 48 of these Romano-British samples, representing disturbed/waste ground, wetland and woodland/hedgerow environments, the latter including the residues of wild and possibly gathered plant foods such as plum/bullace fruit stones, elder and blackberry/raspberry seeds and hazelnut shell fragments. Large numbers of uncharred seeds, however, were only recorded in 11 flots with moderate to high species diversity in five samples from Tar Farm 5; from pit fills [5726] (5020), [5103] (5011), [6535] (5037), [6703] (5027), [7931] (5066) and [10734] (5169), waterhole fill [12567] (12500), clay layers [8520] (5093), [8521] (5094) and [8522] (5095), and grave fill [8457] (5102). A number of these rich samples also contained large amounts of wood fragments and occasional bud fragments and these are likely to represent deposits that were waterlogged until relatively recently.

Other environmental remains in these flots consisted of variable amounts of fragmented bone in 46 samples, with moderate to large amounts in 21 flots, including from 19 grave fills and with burnt bone in the cremation fills. This material, however, was poorly preserved and is likely not to be identifiable. There were also a few insect fragments in 15 samples and molluscs in 37 flots including moderate numbers of snails in 11 samples, all from grave fills.

DUGM

As noted above, most of the samples (51 of 56) from DUGM were only broadly dated to the Roman period at the time that the charred plant remains were assessed, with a large number being from cremation burials (25 samples) and ditch fills (14 samples). The remaining flots were from inhumation grave fills (three samples), hearths and pit fills (each with two samples), and a layer, while four samples were from undefined features. These samples were collected from various parts of the site including Areas 4 and 10 (DUGM90) and Trenches 13, 15, 25, 26 and 28 in Area 6-8 (DUGM95).

Charred plant remains were present in small amounts in 30 flots, in 17 cremations, nine ditch fills (with seven samples from fill [2002]), two graves, a hearth and an undefined context. Charred grain was noted in 27 flots but was generally very poorly preserved, although hulled wheat and hulled barley were identified along with traces of free-threshing wheat. Occasional chaff fragments of hulled wheat were present in four samples. Other charred botanical material was found in 14 flots, these remains being mainly from a small range of wild plants/weeds, probably associated with cereal cultivation, some of which can be identified to species including stinking chamomile. Occasional onion couch tubers in several cremations may represent the residues of spent fuel. Hazelnut shell fragments and some of the indeterminate legume seeds may, however, be the residues of plant foods.

Identifiable charcoal, including round wood, was noted in 37 of the samples and included oak, ash and Pomoideae. There were moderately rich and rich charcoal assemblages in 20 of these flots, in cremation fills [3003], [3016], [3102], [3521], [3522], [3523], [53] (31), [63] (15, 16, 30), [67] (22 and 29), ditch fill [2002] (samples 9, 10, 11, 13, 14, 16, 18), and from an undefined context [114] (1).

Uncharred wild plant/weed seeds were present in 38 flots. Where they are in small amounts it is likely that they are intrusive. Large amounts of uncharred seeds in two flots are likely to represent dried out formerly waterlogged material. These included flots from layer [5] (1) Trench 28 (Area 6-8) with a moderate species representation mainly of wetland (including aquatic) plants and fragmented wood; and in cremation fill [53] (31) in Trench 15 of the same area, although there was only a small number of taxa in this flot, predominantly of disturbed/waste ground plants

Other biological remains in these samples consisted of low amounts of fragmented bone, probably unidentifiable, in 22 samples, including small burnt bone fragments in many of the cremations, occasional insect (beetle) remains in 32 flots, which are likely to be intrusive, and small numbers of snails in 28 flots.

Undated

SLGM

Nine samples were assessed from features that have yet to be dated, from four pit fills, two ditch and grave fills and an undefined context, five of these samples being from Area 3, three from Area 4 and one from Area 5.

Occasional and small amounts (D) of identifiable charred plant remains were present in just four of these samples (grain in all four and chaff and wild plant/weed seeds in two each), with one productive flot being from Area 4 and three from Area 3. Potentially identifiable charcoal was noted in six samples, represented by small numbers of fragments in five samples and a slightly larger amount in sample 12009 from [12002] (Area 5) which included oak/ash.

Uncharred wild plant/weed remains were numerous and diverse in two flots, from ditch fill [5087] (5009) and cremation fill [10952] (5172) from Areas 3 and 4 respectively. Both these samples contained large quantities of fragmented wood and are likely to have been waterlogged at some point in the not too distant past. Other biological material included only small amounts of bone, insect and mollusc remains in four, five and three samples respectively.

Hand picked charcoal

The results are shown in Table [3.3](#). Very small amounts of fragmented charcoal was hand-collected from four late Roman pit fills and a ditch fill while a few uncharred hazelnut fragments

were recovered from pit fill [7707]; the paucity of remains limits the potential of this material and it is difficult to establish the level of intrusive activity in these features.

Summary and potential of the biological remains

The charred plant remains

The assessment results from SLGM and DUGM showed that just over half of the selected samples produced identifiable charred plant remains consisting mainly of charred cereal grains, cereal chaff and wild plants/weed seeds, with few other potential economic/food plants except for possible lentil, some of the indeterminate legumes and hazelnut shell.

Initial results suggest that hulled wheat, mainly spelt and to a much lesser extent, emmer, and hulled barley, were the main cereals on the site with some evidence also for the use of free-threshing wheat; it is not possible at this stage to comment on the oat grains recovered from the samples. This evidence corresponds well with previous archaeobotanical research for the Romano-British period in southern England which suggests that the main crops were spelt wheat and hulled barley with some emmer and free-threshing wheat (Greig 1991, 309), although there is considerable regional variation regarding the types of crop grown across southern England during the Roman period. Sites fairly close to Gill Mill include Farmoor (Lambrick and Robinson 1979) that produced evidence of mainly spelt wheat, and Barton Court Farm, Abingdon, where free-threshing wheat was very common (Jones and Robinson 1986), although the presence of bread wheat at Barton Court Farm should be treated with some caution since Saxon pottery is present at the site (Pelling pers. comm.). In Oxfordshire emmer continues to be relatively important. This is in sharp contrast to the Hampshire chalk north of Winchester where it is only present as a contaminant and to the areas south of Winchester where emmer appears to have been grown as a crop in its own right (cf. Campbell 2008). If bread wheat rachis is present in the samples from Gill Mill it should be considered for radiocarbon dating, since the introduction of bread wheat in the late Roman period is of considerable interest.

The quantity and quality of the botanical material within individual assemblages at Gill Mill, however, was limited, with 102 (almost 90%) of the 115 productive flots containing only traces or small amounts of charred plant remains, probably representing background cereal debris blowing around the site and thus not necessarily associated with the use/function of the sampled features. Only six samples, all from SLGM, produced rich quantities of material while two flots contained good-sized botanical assemblages and five samples had moderate amounts of identifiable remains.

The few productive samples dated to the middle Iron Age and early Roman period in the SLGM area, contained only traces of poorly preserved grain and weeds and thus provide limited evidence on crop husbandry during these periods. The 13 productive flots (12 from SLGM and one from DUGM), taken from a range of middle Roman features, also mainly consisted of only small amounts of material, with the exception of a moderate sized assemblage from pit fill [12005] (12001) (SLGM Area 5). Identifiable grain, chaff and weed/wild plant seeds from all 12 samples may, however, collectively provide general background data on crop-husbandry and processing, with initial results showing the presence of hulled wheat including spelt, and hulled barley, and weed seeds suggesting the use of clay and loam soils.

There were 50 productive samples from late Roman contexts; 48 from SLGM, predominantly from beam slot and pit fills, and two from DUGM, from a pot and pit fill. Forty-two of these samples, however, contained only occasional or small amounts of identifiable charred botanical

material although from SLGM there were rich assemblages in three pit fills [6503], [8238] and [8418], two good sized assemblages in pit fills [6489] and [8461] and moderate amounts in beam slot fills [8386] and [8561] and ditch fill [8502]. The charred plant remains from all the samples may yield evidence on crop husbandry and processing activities, while it may be possible to establish the activity or activities and hence the use of those sampled features containing the rich charred assemblages and thus possibly distinguish areas/concentrations of activity and/or refuse disposal across the site. Again, initial indications are that hulled cereals (wheat and barley) are the main crops although with some evidence for free-threshing wheat. A wide range of weed seeds may provide evidence on various aspects of crop husbandry including the potential range of soils being cultivated, with preliminary results suggesting the use of clay and loam soils. All of the charred plant remains from SLGM were from Area 4.

Forty-seven of 104 samples broadly or provisionally dated as Romano-British contained charred plant remains; in 30 flots from DUGM and in 17 samples from SLGM (one from Area 3 and 16 from Area 4). These samples were mainly from pit, ditch and cremation fills. Only three flots from SLGM (Area 4), however, produced rich charred botanical assemblages from pit fills [6484], [6535] and [6703], while there was a moderate amount in cremation fill [10779]. The remaining samples only consisted of occasional or small amounts of material, often poorly preserved. Thus, the material from Area 4 may provide detailed information on crop husbandry and processing activities (particularly from the richer samples) with the assessment suggesting similar results to the late Roman period samples from this area. The remains from the single sample in Area 3, however, have more limited value. The cremation samples from both SLGM and DUGM did not produce sufficiently significant amounts of material (including grain and weed seeds) to establish whether or not the remains derive from food offerings or simply debris used as tinder, with some of the DUGM cremation fills including onion couch tubers, a potential fuel source. Four of the nine undated samples from SLGM only contained occasional charred plant remains which if dated are unlikely to add greatly to our understanding of the agricultural economy of the site.

Thus, the bulk of the charred botanical data on the arable economy of the settlement is from SLGM and from the late Roman samples, with only very general comparisons possible between this period and the earlier middle Roman occupation of the site. Refined dating of the samples only broadly dated as Romano-British may, however, allow for further comparisons. The dearth of identifiable material in samples from the DUGM excavations limits comparisons with the botanical remains from SLGM. However, to ensure complete coverage, the analytical report should include an overview of the assessment data and a few of the smaller assemblages should be fully quantified in order to show clearly how the deposits vary in terms of charred plant remain content.

Charcoal

Identifiable charcoal was present in 174 (78%) of the samples, with 83 containing moderate or large numbers of identifiable fragments, in 62 samples from SLGM and 21 from DUGM. From SLGM there were rich assemblages from middle Roman deposits (in 11 samples from pit and ditch fills and a probable oven fill), late Roman features (in 36 flots from mainly pit fills and also ditch fills but also a few beam slot fills and a layer), and in 15 samples from Romano-British features, predominantly from cremation fills and pit fills but also a few layers. There were samples of middle Roman date from both Area 4 and Area 5 (with a single sample from Area 3), but late Roman samples are confined to Area 4. Samples with rich charcoal assemblages from DUGM included one late Roman pit fill and Romano-British cremations and ditch fill.

The charcoal from both areas may provide information on the range of woodland taxa used for different activities, including fuel selection for domestic/economic use, for example in the oven fill, and for ritual practices, for instance in the cremations. These remains may also yield evidence on woodland management and woodland resources available at the time, and contribute towards environmental reconstruction, with comparisons possible between the middle and late Roman periods on the basis of the charcoal from SLGM. Initial results show the presence of ash, oak, hazel/alder and Pomoideae charcoal.

For both areas of the site, South Leigh and Ducklington, a dual approach to the analysis will be undertaken:

1. Broad characterisation of the assemblages by scanning and examination of c20 fragments at low magnification, with rare confirmation of identifications at higher magnification
2. Full analysis of selected contexts (50-100 fragments depending upon diversity) which are deemed of particular significance or high taxonomic diversity.

This will provide a presence dataset from which to examine broad fuel use and temporal trends, and a detailed dataset for important features such as cremations etc.

Uncharred plant remains

Uncharred plant remains were present in 195 (88%) of the assessed samples from SLGM and in 42 (75%) of the 56 assessed flots from DUGM. This material is likely to be intrusive, when present in only small amounts and in association with obvious root activity. It is possible, however, that the larger assemblages may be contemporary with the sampled features, a probability increased when there is also good species diversity and other potential 'waterlogged' material. Seventeen samples (16 from SLGM and one from DUGM) contained good sized and rich uncharred seed assemblages with moderate to high numbers of taxa and also other organics, such as wood and bud fragments; in SLGM (mainly Area 4) from middle Roman features (two ditch fills - one each in Areas 3 and 5), late Roman contexts (seven samples all from pit fills); Romano-British fills in five samples from pit fills and the fill of a waterhole; and from two undated contexts, a ditch and cremation fill; and in DUGM from a Romano-British layer.

This material was from plants associated with disturbed and waste ground habitats, wetland environments and woodland/hedgerow/scrub vegetation, including the residues of potential wild fruits and nuts, and as such may provide information on the nature of the local environment within and in the close proximity of these sampled features. The remains may also shed light on the range of possibly gathered wild foods. It is important, however, to consider the archaeological context of these potential 'waterlogged' assemblages in order to establish whether or not these remains are intrusive or not before selecting samples for analysis. Soil, however, has also been separately processed for 'waterlogged' remains from eight of the 16 dried flots from South Leigh containing rich uncharred plant assemblages, suggesting that the remains from these samples at least are likely not to be intrusive. The results for the richer dried flots may provide additional information to the evidence from the 'wet' flots.

Other biological remains

Variable amounts of bone and insect fragments and molluscs were recovered from a large number of samples from both SLGM and DUGM; the poor preservation of the bone, however, means that most of it is probably not identifiable while the few insect (beetle) remains may be intrusive. There were a number of moderately rich snail assemblages in the SLGM samples but

much of this material was fragmentary and from grave fills and may be intrusive; large amounts of molluscs, however, from middle Roman ditch fills [5027] and [12763] (SLGM Areas 3 and 5 respectively) may merit further analysis for information on the character of the habitat within and close to the ditches, although the remains in [12763] were very fragmented.

DUGM: Recommendations for the analysis of botanical remains

On the basis of the poor assessment results from Ducklington no further work involving the sorting and quantification of the flots is required although it is recommended that the small amounts of identifiable material in the 32 samples is recorded, either on the basis of the assessment results and/or by rapid scanning of selected contexts. The results, however, do not necessarily have to be tabulated. Identifiable charcoal fragments should be selected from the 21 samples containing large amounts of identifiable fragments, or samples selected ensuring that all potential periods/areas are covered as well as different context types. It is also recommended that the rich 'waterlogged' plant remains from layer [5] (DUGM95) should be recorded if it can be established that these remains are contemporary with the sampled feature and not intrusive. This data may provide general albeit limited information on the following:

- the character of food remains on the site
- crop husbandry
- the nature of the local environment
- woodland management
- the exploitation of woodland for domestic and other fuel use

Around 21 moderately rich/rich charcoal assemblages, or selection of samples from the different context types, are recommended for further work (broad characterisation by scanning/examination of at least 20 fragments from each), with a likelihood of 5 to be taken to full analysis – ie record of 50-100 fragments, the selection to be made on based on richness and diversity of taxa). These are from the following contexts:

Late Roman pit fill [3005/C/4] (sample 62)

Romano-British cremation fills [3003], [3016], [3102], [3521], [3522], [3523], [53] (sample 31), [63] (samples 15, 16, 30), [67] (22 and 29); ditch fill [2002] (samples 9, 10, 11, 13, 14, 16, 18); undefined context [114] (sample 1)

SLGM: Recommendations for the analysis of botanical remains

On the basis of the assessment it is recommended that full analysis (including sorting and quantification) is carried out on the 13 charred plant assemblages with moderate to rich amounts of identifiable material. It may be necessary to subsample the six very rich flots using a riffle-box with a percentage being quantified and the remaining fraction scanned for additional species. The presence of the occasional or small amounts of identifiable remains from the other 70 productive flots should also be recorded either using the assessment results and/or by rapid scanning of selected contexts. These results do not necessarily have to be tabulated although they may be used in the general discussion of the botanical evidence from the site.

With regard to the charcoal, fragments from all 63 rich charcoal assemblages could be identified or a selection of samples made, ensuring that all potential periods/areas are covered as well as different context types. All should be scanned to broadly characterise the samples and 8-10

should be fully recorded (50-100 fragments, depending on species diversity). The aims of the analysis will be as above. Collectively the botanical data may address the following:

- the character of food remains on the site
- crop husbandry and processing activities
- the nature of activities across the site
- the exploitation of wild food resources
- the character of the local environment
- woodland management
- the exploitation of woodland for domestic and other fuel use
- potential changes between the middle and late Roman periods

Thirteen charred plant assemblages (6 rich, sub-sampled, 2 good, 5 moderate sized): 6.5 days are proposed for full analysis, as follows:

Middle Roman pit fill sample 20001

Late Roman pit fill samples 5038, 5040, 5072, 5082, 5084, beam slot fill samples 5080, 5108; ditch fill 5090

Romano-British pit fill samples 5027, 5037, 5039, cremation fill sample 5173.

It is recommended that identification of 20 fragments from the following 63 moderately rich/rich charcoal assemblages or selection of samples from the different context types should be undertaken, as follows:

Middle Roman pit fill samples 5025, 5073, 5151, 12001, 12875, ditch fill samples 5123, 5125, clay layer samples 5096, 5097, 5098, oven fill sample 5086

Late Roman pit fills samples 5023, 5024, 5026, 5028, 5029, 5033, 5034, 5035, 5036, 5038, 5040, 5043, 5056, 5062, 5063, 5065, 5067, 5071, 5072, 5120, 5082, 5084, 5127, 5126, ditch fill samples 5085, 5089, 5090, 5091, 5099, 5100, 5105, beam slot fills samples 5080, 5100, 5106, 5110, layer sample 5060

Romano-British cremation fill samples 5015 (spits 1, 2, 3), 5148, 5150, 5173, 5174, 5175, pit fill samples 5020, 5027, 5037, 5126, 5169, clay layer samples 5094, 5095

Undated sample 12009

Up to 13 rich assemblages are recommended for analysis as potential 'waterlogged' samples and are listed and discussed further with the assessment of waterlogged plant remains.



Table D.3.1: SLGM environmental samples by phase

Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (m)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
3	5005	5060	5061	5062	MIA	ring ditch	40	6	+/++++	+			+		++	++	D	V occ cpr (indet grain (3))/occ id'ble charcoal fragments; uncharred seeds (<i>Polygonum/Persicaria</i> sp., <i>Sonchus</i> sp.); mainly fine sediment crumb/gravel & roots; occ beetle fragments & molluscs
4	5122	9144	9131	9444	MIA	ding ditch	30	13	++/++++				++	++	+	+	F	NO cpr/ occ id'ble charcoal Mainly roots & fine sediment crumb/gravel; Uncharred seeds (<i>Sambucus</i> sp.)
3	5014	5155	5160	5177	ER	ditch	20	2	+/+++	+	+	+	+++				D	v occ cpr (grain frag+, <i>Avena</i> sp. awn, <i>Medicago/Trifolium</i> sp.); v occ id'ble charcoal fragments; mod nos w/ seeds (<i>Polygonum/Persicaria</i> sp, <i>Stellaria media</i> , <i>Sambucus</i> sp., <i>Urtica dioica</i> , <i>Sonchus</i> sp., <i>Carex</i> sp., <i>Ranunculus Batrachium</i>); mainly sediment crumb
3	5013	5187	5189	5175	ER	ditch	-	-	+/-								F	CHARCOAL SAMPLE (3 potentially id'ble fragments 2-4mm including cf. <i>Quercus</i> sp.)
3	5000	5027	5028	5029	MR	ditch	40	30	++/++++	++	+	+	++++		+	++++	D	Occ cpr & id'ble charcoal fragments; <i>Triticum</i> sp.(1), indet grain (7) & fragments+, <i>Triticum</i> sp spiklet base (1), cf <i>Bromus</i> sp. (1); uncharred seeds (<i>Rubus</i> sp.+++ , <i>Urtica dioica</i> , <i>Ranunculus Batrachium</i> , <i>Carduus/Cirsium</i> sp., <i>Juncus</i> sp., <i>Sambucus</i> sp., <i>Chenopodium/Atriplex</i> sp.); mainly molluscs, sediment crumb/gravel & roots; occ beetle fragments
3	5001	5030	5031	5029	MR	ditch	-	-	+/-								F	CHARCOAL SAMPLE-- several potential identifiable



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		fragments (2-10mm)
4	5025	5923	5921		MR	pit	10	115	++++/+++++	+		+	+++	+		+	D	very occ cpr (indet cereal grain frags+; <i>Cyperaceae</i> , indet seeds); mod nos id'ble charcoal fragments; uncharred seeds (<i>Sambucus</i> sp., <i>Conium maculatum</i> , <i>Alnus</i> sp., <i>Hyoscyamus niger</i> , <i>Eleocharis</i> sp., <i>Carex</i> sp., <i>Juncus</i> sp.); mainly fragmented charcoal & fine sediment crumb/gravel; occ small mammal bone & molluscs; 50% flat <0.5mm scanned
4	5044	6879	6878		MR	grave	10	2	-/++++				++			+	F	NO cpr/id'ble charcoal; uncharred seeds (<i>Ranunculus</i> sp., <i>Poaceae</i> indet.), mainly sediment crumb & v frag charcoal; occ molluscs
4	5045	6879	6878		MR	grave	10	2	-/++++				++	+		+	F	NO cpr/id'ble charcoal; uncharred seeds (<i>Ranunculus</i> sp., <i>Polygonum/Persicaria</i> sp., <i>Sonchus</i> sp.); mainly roots; occ bone & molluscs
4	5046	6879	6878		MR	grave	10	13	+/++++				+	++	+	+	F	NO cpr/1-2 pot d'ble charcoal fragments; uncharred seeds (<i>Ranunculus</i> sp., <i>Polygonum/Persicaria</i> sp.); mainly sediment crumb & vv frag charcoal/wood; occ small bone, beetle fragments & molluscs
4	5051	6879	6878	6923	MR	grave	10	12	-/+				+	+			F	NO cpr/ id'ble charcoal fragments; uncharred seeds (<i>Polygonum/Persicaria</i> sp.); mainly fine sediment crumb & small wood fragments; occ small indet bone fragments
4	5052	6879	6878	6923	MR	grave	10	2	-/+++				+			+	F	NO cpr/ id'ble charcoal fragments; uncharred seeds (<i>Ranunculus</i> sp., <i>Poaceae</i> indet); mainly sediment



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		crumb; occ molluscs
4	5053	6879	6878	6923	MR	grave	10	1	-/+++				+	+		+	F	NO cpr/id'ble charcoal fragments; uncharred seeds (<i>Ranunculus</i> sp., <i>Juncus</i> sp.); mainly sediment crumb; occ small indet bone frags & molluscs
4	5055	6879	6878	6923	MR	grave	10	2	-/+++				+	+	+		F	NO cpr/ id'ble charcoal fragments; uncharred seeds (<i>Urtica</i> sp., <i>Juncus</i> sp.); mainly sediment crumb; occ small indet bone & beetle frags
4	5073	8329	8322		MR	pit	27	22	+++ /++++	+			++	+		+	D	V occ charred grain (sorted) (<i>Triticum dicoccum/spelta</i> (1), cf <i>Triticum</i> sp.(1), cf <i>Avena</i> sp.(1), indet & fragments+); moderate id'ble charcoal; mainly fine sediment crumb & v fragmented charcoal; uncharred seeds (<i>Rumex</i> sp., <i>Sambucus</i> sp., <i>Chenopodium/Atriplex</i> sp.); occ small mammal bone & molluscs
4	5086	8397	8372		MR	oven	10	76	+++++ /++++	+	+	+	+	++		++	D	Occ cpr (sorted) (cf. <i>Triticum dicoccum/spelta</i> grain (1); indet grain (4) & fragments+, <i>Triticum</i> sp. spikelet bases (1); Cyperaceae (1), Asteraceae (1); mod nos potentially id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+++ , <i>Polygonum/Persicaria</i> sp.); mainly charcoal & fine sediment crumb; occ small indet (burnt) bone frags & molluscs;
4	5096	8490			MR	clay layer	40	250	+++ /++++	+			++++	++	+		D	Occ cpr (indet grain fragments+); mod nos. potentially id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+++ , <i>Polygonum/Persicaria</i> sp. ++, <i>Sambucus</i> sp., <i>Rumex</i> sp.++); > fine sediment crumb & roots; occ small indet bone & beetle frags;



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		25% flot<1mm scanned
4	5097	8492			MR	clay layer	40	130	+++/++++	++	+		++++	+	+		D	Occ cpr (cf <i>Triticum dicoccum</i> / <i>spelta</i> (1), cf <i>Triticum</i> sp. (1), ndet grain (3) & fragments +; <i>Triticum</i> sp. glume/spikelet bases (2); mod. potentially id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+ +, <i>Polygonum/Persicaria</i> sp.++, <i>Rumex</i> sp.++, <i>Sambucus</i> sp., Poaceae indet); mainly roots, & fine sediment crumb; occ small indet bone frags & beetle fragments
4	5098	8494			MR	clay layer	40	60	++++/++++	+	+	+	++++	+		+	D	Occ cpr (cf <i>Hordeum</i> sp. (1), ndet grain (1); <i>Triticum spelta</i> glume base <i>Triticum</i> sp. glume bases; <i>Galium aparine</i> (1); mod. potentially id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.++, <i>Polygonum/Persicaria</i> sp.++, <i>Rumex</i> sp.++, <i>Carduus/Cirsium</i> sp., <i>Urtica dioica</i> , <i>Carex</i> sp.); mainly roots, & fine sediment crumb; occ small indet bone frags & molluscs; 25% flot <0.5mm scanned
4	5123	8897	8883	8771	MR	ring ditch	-	-	+++/-				+		+		F	CHARCOAL SAMPLE Mod amounts id'ble charcoal from residue Uncharred <i>Corylus avellana</i> shell fragment
4	5125	8937	8936	8771	MR	ring ditch	29	92	+++/++++	+	+	+	++++	+	+	++	D	Mod amounts id'ble charcoal (cf. <i>Quercus</i> sp., cf. Pomoideae), indet grain (2) & fragments+; <i>Triticum spelta</i> glume base (2), <i>Triticum</i> sp. glume base (2), <i>Galium aparine</i> (1), <i>Avena/Bromus</i> sp (1), Poaceae indet (2) (small & large) GOOD organic assemblage with mod nos w'logged seeds - <i>Urtica dioica</i> , <i>Aethusa cynapium</i> , <i>Polygonum</i>



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		<p><i>aviculare</i>, <i>Rubus</i> sp., <i>Sambucus</i> sp., <i>Silene</i> sp., <i>Rumex</i> sp., <i>Chenopodium/Atriplex</i> sp., <i>Carduus/Cirsium</i> sp., <i>Carex</i> sp., <i>Juncus</i> sp.); Also w/ logged wood fgs++; 25% flat <0.5mm scanned</p>
4	5151	10450	10454		MR	pit	32	210	+++++/++++	++	+		++++	++		++	D	<p>Mod amount id'ble charcoal, cf. <i>Triticum</i> sp. grain (1) indet grain (7) (possibly <i>Triticum</i>) & fragments+; cf. <i>Triticum spelta</i> glume base (1), <i>Triticum</i> sp. glume base (2)</p> <p>Mainly fine sediment crumb/gravel & fragmented charcoal; bone includes occ small mamm bone</p> <p>> nos uncharred seeds (><i>Chenopodium/ Atriplex</i> sp., <i>Polygonum/ Persicaria</i> sp., <i>Sambucus</i> sp., <i>Carex</i> sp.)</p>
5	12000	12004	12003		MR	pit	15	2	+/++++	+		+	+	+	+		D	<p>v. occ cpr (indet cereal frags+, <i>Eleocharis</i> sp.(1))/1-2 pot. id'ble charcoal fragments; uncharred seeds (<i>Polygonum/Persicaria</i> sp.); mainly v fragmented charcoal & fine sediment crumb; occ indet small bone frags & beetles</p>
5	12001	12005	12003		MR	pit	57	250	+++++/++++	+++	+	++	++	++		+	C	<p>MAINLY CHARCOAL (>nos id'ble charcoal fragments including round wood, cf. <i>Fraxinus</i> sp.), occ cpr (20-30 grains (poorly preserved) - <i>Triticum dicoccum/spelta</i>, <i>Triticum</i> sp., <i>Hordeum vulgare</i> indet grains & frags; <i>Secale cereale</i> rachis fragment; occ culm node/internode & bud fragments; c 10-20 weed seeds - <i>Medicago/Trifolium</i> sp, <i>Rumex</i> sp., <i>Vicia/Lathyrus</i> sp., <i>Galium</i> sp., <i>Carex</i> sp., <i>Eleocharis</i> sp., <i>Bromus</i> sp., <i>Anthemis cotula</i>, <i>Arrhenatheum elatius</i>, indet seeds); uncharred seeds <i>Chenopodium/Atriplex</i> sp., <i>Polygonum/Persicaria</i> sp., <i>Taraxacum</i> sp., <i>Sonchus</i> sp.)</p>



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		Small nos of indet bone fragments & occ molluscs 5% flot <0.5mm scanned
5	12875	12875	12872		MR	pit	16	50	++++/+++++	++		++	++				D	Mod nos id'ble charcoal fragments (cf. <i>Quercus</i> sp.); occ cpr (<i>Triticum dicoccum/spelta</i> , <i>Triticum</i> sp., indet & fragments (c 20 grains), <i>Eleocharis</i> sp., <i>Cyperaceae</i> , <i>Vicia/Lathyrus</i> sp. (5-10 seeds)); uncharred seeds (<i>Hyoscyamus niger</i> , <i>Aethusa cynapium</i> , <i>Juncus</i> sp.); mainly fragmented charcoal & fine sediment crumb; occ small bone fragments (including burnt & a tooth)
5	12002	12007	12006		MR	ditch	4	8	+/+++++				+				F	NO cpr/occ id'ble charcoal fragments; uncharred seeds (<i>Rubus</i> sp.); mainly roots & v fragmented charcoal
5	12501	12763	12762	12595	MR	ditch	28	120	+/++++				+++++		++	++++	F	Virtually no id'ble charcoal/no cpr; mainly sediment crumb, molluscs (whole & fragments) & good nos 'waterlogged' seeds mainly wetland species (> <i>Ranunculus Batrachium</i> ++++; <i>Carex</i> sp.+++; <i>Eleocharis</i> sp.++, <i>Chara</i> sp., <i>Juncus</i> sp., <i>Ranunculus</i> sp., <i>Chenopodium/Atriplex</i> sp., <i>Urtica dioica</i> , <i>Polygonum/Persicaria</i> sp.); occ beetle fragments, good nos molluscs but fragmentary; 50% flot<1mm scanned
4	5075	8377	8376	8371	?LR	beam slot	20	10	+/++++	+	+	+	+++		+	+	D	V occ cpr (sorted) (cf <i>Triticum</i> sp.(1), indet & frags+; <i>Triticum spelta</i> glume base(1), <i>Triticum</i> sp glume base(1), rachis (1); <i>Bromus</i> sp. (2), <i>Avena/Bromus</i> sp. (1), <i>Rumex</i> sp. (1); occ id'ble charcoal frags; uncharred seeds (<i>Rumex</i> sp., <i>Sonchus</i> sp., <i>Chenopodium/Atriplex</i> sp., <i>Persicaria</i> sp., <i>Stellaria media</i>); Mainly roots & sediment crumb; occasional molluscs & earthworm egg cases



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
4	5076	8378	8376	8371	?LR	beam slot	7	<1	+/+				+				F	NO cpr; 1-2 potentially id'ble fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.); virtually nothing
4	5077	8380	8379	8371	?LR	beam slot	30	80	+/+++	++	++	+	++++	++	+	+	D	Occ cpr (sorted) (cf <i>Hordeum</i> sp (1), cf <i>Triticum</i> sp. (1), indet grain & fragments++, cf. <i>Triticum spelta</i> glume base (2), <i>Triticum</i> sp. glume/spikelet bases (6); <i>Anthemis cotula</i> (1)); 1-2 potentially id'ble fragments;> nos uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+++; <i>Rumex</i> sp., <i>Polygonum/Persicaria</i> sp.+++; <i>Sambucus</i> sp.); mainly roots & >fine sediment crumb; occ beetle & molluscs & v small indet bone frags; 25% flat <0.5mm scanned
4	5078	8383	8382	8371	?LR	beam slot	7	16	++/++++	++	++	+	+++	++		+	D	Occ cpr (sorted) (indet grain (2) & fragments++, cf. <i>Triticum spelta</i> glume base (1), <i>Triticum</i> sp. glume/spikelet bases (4); <i>Anthemis cotula</i> (1)); occ potentially id'ble fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+++; <i>Rumex</i> sp., <i>Polygonum/Persicaria</i> sp.+++; <i>Taraxacum</i> sp.); mainly roots & fine sediment crumb/gravel; occ molluscs & v small indet bone frags;
4	5079	8384	8382	8371	?LR	beam slot	3	2	++/++++	++	+		+++	++			D	Occ cpr (indet grain (1) & fragments++, <i>Triticum</i> sp. glume bases (2)); occ potentially id'ble fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.++, <i>Rumex</i> sp., <i>Polygonum/Persicaria</i> sp.+++; <i>Sambucus</i> sp.); roots & fine sediment crumb/gravel; occ v small indet bone frags;
4	5080	8386	8385	8371	?LR	beam slot	38	100	+++++/+++++	+++	+++	++	++++	++	+	++	C	Moderate cpr (c 50+ grains mostly indet, & fragments of <i>Triticum dicoccum/spelta</i> , <i>Triticum</i> sp.; chaff c 25+ frags - <i>Triticum spelta</i> glume bases, <i>Triticum</i> sp. glume/spikelet bases; weeds (<10) - <i>Anthemis cotula</i> ,



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		<i>Medicago/Trifolium</i> sp., Poaceae indet.); moderate nos potentially id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.++, <i>Rumex</i> sp., <i>Polygonum/Persicaria</i> sp., <i>Sambucus</i> sp., <i>Rubus</i> sp., <i>Carex</i> sp.); >roots & fine sediment crumb; occ v small indet bone frags including fish; occ beetles, molluscs; 25% flat <0.5mm scanned
4	5081	8388	8387	8371	?LR	beam slot	6	5	+/++++	++	++		+++		+		D	Occ cpr (sorted) (indet grain (3) & fragments++, <i>Triticum spelta</i> glume base (1), <i>Triticum</i> sp. spikelet bases (4); 1-2 potentially id'ble fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+++ , <i>Rumex</i> sp., <i>Polygonum/Persicaria</i> sp.); > roots & fine sediment crumb; occ pupae & earthworm egg cases
4	5087	8500	8499	8371	?LR	beam slot	22	20	++/+++	+			+++		+	++	D	Occ cpr (one <i>Triticum</i> sp. grain (1); occ potentially id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp., <i>Polygonum/Persicaria</i> sp., <i>Rumex</i> sp., <i>Sonchus</i> sp., <i>Sambucus</i> sp.); mainly roots; occ beetle fragments & molluscs
4	5088	8515	8499	8371	?LR	beam slot	7	18	++/++++	++	++		+++	+	+		D	Occ cpr (indet grain & fragments (c 8-9), <i>Triticum</i> sp. glume/spikelet bases (c 6); occ. potentially id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+++ , <i>Polygonum/Persicaria</i> sp., <i>Rumex</i> sp., <i>Carduus/Cirsium</i> sp.); mainly roots, v fragmented charcoal & fine sediment crumb; occ small indet bone frags & molluscs;
4	5106	8559	8382	8371	?LR	beam slot	16	38	+++ /+++++	++	++	+	+++	+++		+	D	Mod amounts id'ble charcoal, indet poorly preserved grain (c 6), fragments ++, <i>Triticum spelta</i> glume base (1), <i>Triticum</i> sp. glume/spikelet bases (4); Poaceae indet



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flot vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		(small) (2) Mainly fine sediment cmmb/gravel Uncharred seeds (<i>Chenopodium/Atriplex</i> sp., <i>Rumex</i> sp., <i>Polygonum</i> sp.,)
4	5107	8560	8382	8371	?LR	beam slot	8	10	+/+++++	+	++		+++		+		D	V. occ id'ble charcoal, indet grain fragments+, <i>Triticum spelta</i> glume base (2), <i>Triticum</i> sp. glume bases (2), <i>Triticum</i> sp. rachis (1) Mainly roots & fine sediment cmmb/gravel; Uncharred seeds (<i>Chenopodium/Atriplex</i> sp., <i>Polygonum</i> sp)
4	5108	8561		8371	?LR	beam slot	36	160	+++ /+++++	++	++		++++	++++		+++	C	Mod amounts id'ble charcoal, indet poorly preserved grain (c 10), fragments ++; <i>Triticum spelta</i> rachis (1) & glume base (1) <i>Triticum</i> sp. glume/spikelet bases (11); <i>Triticum</i> sp. rachis (4), <i>Avena</i> sp. awn (1); Mainly roots & fine sediment cmmb/gravel Uncharred seeds (<i>Chenopodium/Atriplex</i> sp., <i>Rumex</i> sp., <i>Polygonum</i> sp.,); 50% flot <0.5mm scanned; mod nos of molluscs but fragmentary
4	5109	8562		8371	?LR	beam slot	15	18	-/+++	+			+++				D	No id'ble charcoal, <i>Triticum</i> sp. grain (1) Mainly roots & fine sediment cmmb/gravel; Uncharred seeds (<i>Chenopodium/Atriplex</i> sp., <i>Rumex</i> sp., <i>Stellaria media</i> , <i>Taraxacum</i> sp., <i>Polygonum</i> sp.)
4	5110	8563		8371	?LR	beam slot	6	27	+++ /+++	+	+		+++	++			D	Mod amounts id'ble charcoal, cf. <i>Triticum</i> sp. grain (1), <i>Avena</i> sp. grain (1), indet cereal fragments +; <i>Triticum</i>



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		<p><i>spelta</i> glume base (1); <i>Triticum</i> sp. glume/spikelet bases (3); Mainly roots & fine sediment cmmmb/gravel Uncharred seeds (<i>Chenopodium/Atriplex</i> sp. <i>Rumex</i> sp.)</p>
4	5111	8564		8371	?LR	beam slot	8	15	+/+++	++	++	+	+++	+			D	<p>Occ id'ble charcoal, <i>Triticum dicoccum/spelta</i> grain (1), indet grain (3) & fragments+, <i>T. spelta</i> glume base (2), <i>Triticum</i> sp. glume bases (3); <i>Rumex</i> sp. (1) Mainly roots & fine sediment cmmmb/gravel; Uncharred seeds (<i>Chenopodium/Atriplex</i> sp., <i>Polygonum</i> sp)</p>
4	5112	8565		8371	?LR	beam slot	4	2	+/++++	+	+		+++	+			D	<p>V. occ id'ble charcoal, indet grain fragments+, <i>Triticum spelta</i> glume base (1) Mainly roots & fine sediment cmmmb/gravel; Uncharred seeds (<i>Chenopodium/Atriplex</i> sp., <i>Polygonum</i> sp)</p>
4	5113	8566		8371	?LR	beam slot	7	20	+/+++	++	++		+++	+	+	+	D	<p>V. occ id'ble charcoal, cf. <i>Triticum</i> sp. (1) indet grain (3) & fragments+, <i>Triticum spelta</i> glume base (1); <i>Triticum</i> sp. glume/spikelet bases (11) Mainly roots & fine sediment cmmmb/gravel; Uncharred seeds (<i>Chenopodium/Atriplex</i> sp., <i>Polygonum</i> sp., <i>Rumex</i> sp.)</p>
4	5114	8567		8371	?LR	beam slot	7	20	+/+++	+			+++	+			D	<p>Occ id'ble charcoal, indet grain (c 4) Mainly roots & fine sediment cmmmb/gravel;</p>



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		Uncharred seeds (> <i>Chenopodium</i> / <i>Atriplex</i> sp., <i>Polygonum</i> sp)
4	5115	8568		8371	?LR	beam slot	7	14	++/++++	++	++		+++	+		+	D	Occ id'ble charcoal, cf. <i>Triticum</i> sp. (2) indet grain fragments (c 10), <i>Triticum spelta</i> glume base (2); <i>Triticum</i> sp. glume bases (10) Mainly roots & fine sediment cmmmb/gravel; Uncharred seeds (<i>Chenopodium</i> / <i>Atriplex</i> sp., <i>Polygonum</i> sp., <i>Rumex</i> sp., <i>Carduus</i> / <i>Cirsium</i> sp., small Poaceae indet)
4	5116	8569		8371	?LR	beam slot	13	12	++/+++	+			++			+	D	Occ id'ble charcoal, <i>Triticum dicoccum/spelta</i> grain (1), indet grain (1) Mainly roots & fine sediment cmmmb/gravel; Uncharred seeds (<i>Chenopodium</i> / <i>Atriplex</i> sp., <i>Polygonum</i> sp., <i>Rumex</i> sp.)
4	5117	8570		8371	?LR	beam slot	4	3	+/++++	+	++		+++	+			D	V. occ id'ble charcoal, indet grain fragments (3), <i>Triticum spelta</i> glume base (1); <i>Triticum</i> sp. glume/spikelet bases (6), <i>Triticum</i> sp. rachis (2), <i>Avena</i> sp. awn (1) Mainly roots & fine sediment cmmmb/gravel; Uncharred seeds (<i>Chenopodium</i> / <i>Atriplex</i> sp., <i>Polygonum</i> sp., <i>Sambucus</i> sp.)
Tar Farm 4	5118	8571		8371	?LR	beam slot	9	30	++/+++	++	++	+	+++	++		+	D	Occ id'ble charcoal, indet grain fragments ++, <i>Triticum spelta</i> glume base (2); <i>Triticum</i> sp. glume bases (2), <i>Avena</i> sp. awn (1); Poaceae indet (small) (1) Mainly roots & fine sediment cmmmb/gravel;



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		Uncharred seeds (<i>Chenopodium/Atriplex</i> sp., <i>Polygonum</i> sp., <i>Rumex</i> sp.)
4	5089	8501		8371	?LR	ditch	32	80	+++ /++++	++			++++	++	+	++	D	Occ cpr (<i>Triticum dicoccum/spelta</i> (1), <i>Triticum</i> sp. (1), indet grain (3) & fragments +; mod. potentially id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+++ , <i>Polygonum/Persicaria</i> sp. ++, <i>Rumex</i> sp.++, <i>Stellaria media</i> , <i>Silene</i> sp., <i>Sambucus</i> sp.); mainly roots, & fine sediment crumb; occ small indet bone frags & insects; mod nos of molluscs; 25% flat<0.5mm scanned
4	5017	5507			LR	layer	-	-	+/-								F	CHARCOAL SAMPLE (2 potentially id'ble fragments 4-10mm)
4	5022	5771			LR	pit	10	20	+ /++						+		F	No cpr/ one id'ble charcoal fragment; mainly roots & fine sediment crumb; occ insect fragments
4	5024	5895	5861		LR	Pit	10	37	++++ /++++	+			+	+	+		D	V occ cpr (<i>Avena</i> sp. (1), indet frags+); mod nos id'ble charcoal fragments; uncharred seeds (<i>Sambucus</i> sp., <i>Urtica dioica</i>); mainly v fragmented charcoal & fine sediment crumb; occ small indet (including small mammal) bone & insects
4	5023	5862	5861		LR	Pit	10	33	++++ /++++				+	+	+		F	No cpr/mod nos id'ble charcoal fragments; uncharred seeds (<i>Sambucus</i> sp.); mainly v fragmented charcoal & fine sediment crumb; occ small mammal bone & insect fragments



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
4	5026	6081	6080		LR	pit	30	-	+++/-								F	CHARCOAL SAMPLE (20-30 potentially id'ble fragments 4-10mm)
4	5028	6136	6134		LR	pit	40	400	+++++/++++	++		++	++++	+++		+	D	occ cpr (<i>Triticum dicoccum/spelta</i> , <i>Triticum</i> sp., indet grains, c 20 grains; <i>Ranunculus</i> sp., <i>Galium aparine</i> , <i>Carex</i> sp., <i>Eleocharis</i> sp., <i>Poaceae</i> indet (c 5 seeds)) (part sorted); >nos id'ble charcoal fragments (cf. <i>Quercus/Fraxinus</i> sp.); uncharred seeds (<i>Sambucus</i> sp., <i>Urtica dioica</i> , <i>Conium maculatum</i> , <i>Hyoscyamus niger</i> , <i>Rubus</i> sp., <i>Polygonum</i> sp., <i>Labiatae</i> , <i>Eleocharis</i> sp., <i>Carex</i> sp., <i>Juncus</i> sp.); mod nos wood fragments; mainly fragmented charcoal; mod nos small indet (including small mammal) bone & molluscs; 50% flat <1mm scanned
4	5029	6151	6134		LR	pit	29	1000	+++++/++++	+		++	++++	+		+	D	V occ cpr (indet grain; <i>Rumex</i> sp., <i>Polygonum</i> sp., <i>Eleocharis</i> sp., indet; v rich in nos id'ble (large) charcoal fragments including round wood (cf. <i>Quercus/Fraxinus</i> sp., <i>Pomoideae</i>); mod rich in uncharred seeds (<i>Aethusa cynapium</i> , <i>Rumex</i> sp., <i>Ranunculus</i> sp., <i>Potentilla</i> sp., <i>Crateagus monogyna</i> , <i>Prunus spinosa</i> , <i>Prunus</i> sp., <i>Coronopus squamatus</i> , <i>Sambucus</i> sp., <i>Urtica dioica</i> , <i>Solanum nigrum</i> , <i>Hyoscyamus niger</i> , <i>Rubus</i> sp., <i>Polygonum aviculare</i> , <i>Eleocharis</i> sp., <i>Carex</i> sp.+++), <i>Juncus</i> sp.); >nos wood fragments, occ bud fragments; mainly fragmented charcoal; mod nos small indet bone fragments & molluscs; 50% flat <2mm & >1mm scanned; 5% flat <1mm scanned
4	5033	6333	6278		LR	pit	29	450	+++++/++++	+		+	++++	+			D	occ cpr (<i>Triticum dicoccum/spelta</i> , <i>Triticum aestivum</i> , indet grains; <i>Avena/Bromus</i> sp., <i>Vicia/Lathyrus</i> sp.); mod nos id'ble charcoal fragments including round wood; uncharred seeds (<i>Prunus domestica</i> , <i>Prunus</i> sp.,



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		<i>Sambucus</i> sp., <i>Urtica dioica</i> , <i>Conium maculatum</i> , <i>Hyoscyamus niger</i> , <i>Ranunculus</i> sp., <i>Stellaria</i> sp., <i>Eleocharis</i> sp., <i>Carex</i> sp.+++ , <i>Juncus</i> sp.); >wood fragments, occ bud fragments; mainly wood fragments & charcoal; occ small indet bone fragments; 50% flot <1mm scanned
4	5034	6334	6278		LR	pit	-	-	+++/-				+				F	CHARCOAL SAMPLE (mod nos potentially id'ble fragments>4mm including round wood, cf. <i>Alnus/Corylus</i> sp.) OCC UNCHARRED PR (<i>Prunus domestica</i> , <i>Prunus</i> sp. frags, wood frags)
4	5035	6445	6451		LR	pit	20	23	+++ /++++				+	+		++	F	NO cpr/; mod nos id'ble charcoal fragments; uncharred seeds (<i>Urtica dioica</i>); mainly fragmented charcoal & sediment/gravel; occ indet small bone fragments, occ molluscs
4	5036	6446	6451		LR	pit	20	15	+++ /++++				++	+		++	F	NO cpr/; mod nos id'ble charcoal fragments; uncharred seeds (<i>Ranunculus</i> sp., <i>Sambucus</i> sp., <i>Urtica dioica</i> , <i>Sonchus</i> sp., <i>Chenopodium/Atriplex</i> sp., <i>Juncus</i> sp.); mainly roots, fine sediment crumb & fragmented charcoal; occ indet small bone fragments, occ molluscs
4	5038	6489	6440		LR	pit	20	130	++++ /++++	++++	+	++	++++	++	+	++	B	MOD RICH cpr (sev 100s grains but poorly preserved & fragmented – mainly indet; id'ble grains mainly <i>Triticum dicoccum/spelta</i> ; also <i>T.aestivum</i> , <i>Triticum</i> sp., <i>Hordeum vulgare</i> , v occ chaff fragments – <i>Triticum</i> sp. glume bases/spiklet forks; small nos weed seeds - <i>Bromus</i> sp.+ +, <i>Medicago/Trifolium</i> sp., Poaceae indet. (large/small), <i>Anthemis cotula</i>), <i>Corylus avellana</i> shell) (part sorted); nos id'ble charcoal fragments; uncharred seeds



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		(<i>Sambucus</i> sp.++, <i>Rumex</i> sp., <i>Hyoscyamus niger</i> , <i>Carex</i> sp.++, <i>Juncus</i> sp. <i>Conium maculatum</i> , <i>Fumaria</i> sp., <i>Atriplex/Chenopodium</i> sp., <i>Eleocharis</i> sp.,); mainly grain & charcoal; occ bone, insect fragments & molluscs; 25% flot <0.5mm scanned
4	5040	6503	6442		LR	pit	20	200	+++++/+++++	+++++	+++++	+++++	++	++		+	A	V RICH cpr ; flot mainly grain & fragmented id'ble charcoal; 1000s grains generally poorly preserved & mostly indet including sprouted grain– mainly hulled wheat (<i>Triticum dicoccum/spelta</i> , occ <i>T. aestivum</i> , <i>Triticum</i> sp., <i>Hordeum vulgare</i> (6x hulled), <i>Avena</i> sp.), cereal chaff esp hulled wheat (<i>T. spelta</i> glumes, <i>T. dicoccum</i> glumes, <i>Triticum</i> sp. glumes, occ <i>Hordeum</i> rachis & <i>Avena</i> awns; >weed seeds especially <i>Bromus</i> sp. & <i>Anthemis cotula</i> (<i>Fallopia convolvulus</i> , <i>Polygonum aviculare</i> , <i>Polygonum/Persicaria</i> sp., <i>Rumex</i> sp., <i>Galium aparine</i> , <i>Tripleurosemum inodorum</i> , <i>Centaurea</i> sp., <i>Malva</i> sp., <i>Vicia/Lathyrus</i> sp., cf <i>Lens culinaris</i> , Poaceae indet.); loose <i>coleoptiles</i> and stem frags; uncharred seeds (<i>Sambucus</i> sp., <i>Carex</i> sp.) occ burnt/small mammal bone & molluscs
4	5048	6597	9596		LR	ph	10	12	++/++++				++	++	+	+	F	NO cpr/occ. id'ble charcoal fragments; uncharred seeds (<i>Sambucus</i> sp., <i>Polygonum/Persicaria</i> sp.); mainly sediment crumb; occ small indet & small mammal bone, insect fragments & molluscs
4	5043	6849	6847		LR	pit	40	400	+++++/+++++	++			+++	++			D	Flot mainly charcoal (good nos id'ble fragments including cf. <i>Quercus/Fraxinus</i> sp.); occ cpr (sorted) (<i>Triticum dicoccum/spelta</i> (3), cf. <i>T. aestivum</i> (1), <i>Triticum</i> sp.(1), indet (3) & frags+; uncharred seeds (<i>Fumaria</i> sp., <i>Rubus</i> sp., <i>Aethusa cynapium</i> , <i>Sambucus</i> sp., <i>Carex</i> sp.) occ burnt bone



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
4	5056	7092	7086		LR	pit	-	-	++++/-								F	CHARCOAL SAMPLE; frags 4-10mm potentially identifiable includes round wood cf <i>Fraxinus</i> sp.
4	5057	7258			LR	silt layer	40	48					++++		+	+	F	NO cpr/id'ble charcoal fragments; mod nos uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+++ , <i>Sambucus</i> sp., <i>Carex</i> sp.++, <i>Polygonum/Persicaria</i> sp., <i>Silene/Stellaria</i> sp., <i>Hyoscyamus niger</i> , <i>Carduus/Cirsium</i> sp.); mainly fine sediment crumb; occ beetle fragments & molluscs
4	5059	7258			LR	alluvia l layer	30	15	-/++				+++		+	++	F	NO cpr/id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.++ , <i>Sambucus</i> sp.++ , <i>Carex</i> sp.++ , <i>Polygonum/Persicaria</i> sp., <i>Silene/Stellaria</i> sp., <i>Hyoscyamus niger</i> , <i>Carduus/Cirsium</i> sp.); mainly fine sediment crumb; occ beetle fragments & molluscs
4	5058	7262			LR	alluvia l layer	20	3	-/+				++++		+	++	F	NO cpr/id'ble charcoal fragments; mod nos uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+++ , <i>Sambucus</i> sp., <i>Carex</i> sp., <i>Polygonum/Persicaria</i> sp., <i>Juncus</i> sp.); mainly roots & fine sediment crumb; occ insect fragments & molluscs
4	5060	7403			LR	layer	32	55	+++++/++++	++	+			+		+	D	Flot virtually all charcoal (good nos id'ble fragments including including cf. <i>Quercus/Fraxinus</i> sp.); occ cpr (sorted) (cf. <i>Triticum dicoccum/spelta</i> (1), <i>Triticum</i> sp.(2), indet (2), <i>Triticum</i> sp. glume base (1)); ; occ indet small bone fragments & molluscs
4	5063	7696	7695	6795	LR	pit	30	950	+++++/++++	+		+	++++	+		+	D	Flot mainly wood & charcoal (mod nos id'ble charcoal fragments; v occ cpr (<i>Triticum</i> sp., <i>Avena</i> sp., indet grain, <i>Galium</i> sp.); mod rich uncharred seeds (<i>Chenopodium/Atriplex</i> sp., <i>Aethusa cynapium</i> , <i>Urtica dioica</i> , <i>Rumex</i> sp., <i>Carduus/Cirsium</i> sp., <i>Rubus</i> sp., <i>Sambucus</i> sp.+++ , <i>Ranunculus</i> sp., <i>Carex</i> sp.++ ,



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flot vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		Juncus sp., Eleocharis sp., Fumaria sp.); >wood fragments, occ bud fragments; occ indet v small bone fragments & molluscs; 50% flot scanned below 2mm; TWO FLOTS 2nd flot 1000ml part assessed (5% flot <2mm scanned)
4	5062	7701	7695	6795	LR	pit	30	92	+++++/++++	+			++++	++		++	D	Good nos id'ble charcoal fragments including round wood cf. Quercus/Fraxinus sp., cf. Fraxinus sp.); v occ cpr (occ indet grain fragments); uncharred seeds (Chenopodium/Atriplex sp.+++ , Sambucus sp., Polygonum/Persicaria sp., Rumex sp., Ranunculus sp.); mainly fine sediment crumb & gravel; occ indet small bone (including small mammal) fragments & molluscs; 25% flot <0.5mm scanned
4	5065	7775	7707		LR	pit	24	400	+++++/++++	++	+	+	++++	++		+	D	Flot mainly charcoal; Good nos id'ble charcoal fragments including including cf. Quercus/Fraxinus sp.; v occ cpr (part sorted) (Triticum sp. (3) indet grain (3) & fragments; Triticum sp. glume base (3); Eleocharis sp. (1)); uncharred seeds (Chenopodium/Atriplex sp., Sambucus sp.++++, Ranunculus sp., Carex sp.++, Hyoscyamus niger, Juncus sp., Eleocharis sp., Fumaria sp.); >wood fragments; occ indet small bone (including small mammal) fragments & molluscs; 25% flot <1mm & >0.5mm scanned; 5% flot <0.5mm scanned
4	5068	7999	8000		LR	pit	30	1100	++/++++	+			++++	++	++	+	D	RICH ORGANIC flot; v occ cpr (Hordeum vulgare, indet grain /occ id'ble charcoal fragments; >> wood fragments (various sizes) & wl seeds with mod spp diversity (disturbed/wet ground) (Urtica dioica, Aethusa cynapium, Sambucus sp., Rumex sp., Polygonum/Persicaria sp., Ranunculus sp., Fumaria sp., Silene/Stellaria sp., Stellaria media, Conium maculatum, Carex sp.++,



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		<i>Juncus</i> sp., <i>Eleocharis</i> sp., <i>Ranunculus sceleratus</i>); occ indet small bone (including small mammal/bird) & beetle fragments & molluscs; 25% flat <2mm & > 1mm scanned; 5% flat <1mm scanned
4	5067	8019	8018		LR	pit	20	200	+++++/++++	+		+	+	+++		+++	D	Flat mainly charcoal; Good nos id'ble charcoal fragments ; vv occ cpr (indet cereal grain fragments; <i>Carex</i> sp., indet seeds); uncharred seeds (<i>Chenopodium/Atriplex</i> sp.); >fine sediment crumb; mod nos small indet bone (including small mammal) fragments & mod nos molluscs; 25% flat <1mm scanned
4	5069	8116	8103		LR	pit	30	1200	+/+				++++			+	F	RICH ORGANIC flat; NO cpr/occ id'ble charcoal fragments (including cf. <i>Quercus/Fraxinus</i> sp.); >> wood fragments (various sizes), occ bud fragments, <i>Corylus avellana</i> shell & wl seeds with mod spp diversity (disturbed/wet ground) (<i>Urtica dioica</i> , <i>Aethusa cynapium</i> , <i>Sambucus</i> sp., <i>Rumex</i> sp., <i>Polygonum/Persicaria</i> sp., <i>Silene/Stellaria</i> sp., <i>Stellaria media</i> , <i>Agrostemma githago</i> , <i>Polygonum aviculare</i> , <i>Ranunculus</i> sp., <i>Rubus</i> sp., <i>Carex</i> sp.+, <i>Juncus</i> sp., <i>Eleocharis</i> sp., <i>Mentha</i> sp., <i>Iris pseudocaris</i>); occ molluscs; 5% flat <2mm scanned
4	5071	8190	8131		LR	pit	8	300	+++++/++++	+			++++	+			D	One <i>Avena</i> sp grain, >charcoal (mod id'ble frags) & >wood (including bark frags); >organics (>nos wl seeds - <i>Thlaspi arvense</i> , <i>Rumex</i> sp+++ , <i>Rubus</i> sp., <i>Atriplex/Chenopodium</i> sp., <i>Brassica/Sinapis</i> sp., <i>Polygonum lapathifolium</i> , <i>Polygonum/Persicaria</i> spp., <i>Aethusa cynapium</i> , <i>Coronopus squamatus</i> , <i>Urtica dioica</i> , <i>Carex</i> sp., <i>Juncus</i> sp., <i>Ranunculus</i> sp.; bud fragments+ +; indet bone frags; 25% flat<1mm scanned



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flot vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
4	5072	8238	8231		LR	pit	30	450	++++/+++++	++++ +	++++ +	++++	+			+	A	V rich cp assemblage (1000s grains generally poorly preserved) mainly 6x hulled <i>Hordeum vulgare</i> & <i>Triticum dicoccum/spelta</i> ; also <i>T. aestivum</i> ; <i>Avena</i> sp+++; <i>T. diococcum</i> glume bases, <i>T. spelta</i> glume bases; <i>Triticum</i> sp rachis; <i>Hordeum</i> / <i>Triticum</i> sp awns, <i>Avena</i> sp awns; weeds > <i>Bromus</i> sp+++ & <i>Avena</i> sp., <i>Rumex</i> sp+++; <i>Agrostemma githago</i> , <i>Tripleurospermum inodorum</i> , <i>Anthemis cotula</i> ++, <i>Poaceae</i> indet (small), <i>Carex</i> sp., <i>Eleocharis</i> sp.; occ culm nodes/internodes & loose coleoptiles; mod nos id'ble charcoal fragments; occ molluscs; 50% flot <2mm scanned
4	5120	8401	8400		LR	pit	30	340	+++ /++++		+	+	++++		+		D	Mod amounts id'ble charcoal including round wood (cf. <i>Quercus</i> sp.); v occ CPR (cf. <i>Triticum spelta</i> glume base (1), cf. <i>Plantago lanceolata</i> (1)); RICH organic assemblage with > w'logged seeds (esp disturbed gd & wetland habitats - > <i>Urtica dioica</i> , <i>Polygonum persicaria</i> , <i>Polygonum</i> sp., <i>P. aviculare</i> , <i>Rubus</i> sp., <i>Stellaria media</i> , <i>S. graminea</i> , <i>Rumex</i> sp., <i>Chenopodium/Atriplex</i> sp., <i>Ranunculus</i> sp., <i>Potentilla</i> sp., <i>Carduus/Cirsium</i> sp., <i>Labiatae</i> , <i>Prunella vulgaris</i> , <i>Thlaspi arvense</i> , > <i>Carex</i> sp., <i>Cyperaceae</i> , <i>Juncus</i> sp., <i>Eleocharis</i> sp. , indet); Also >w'logged wood 50% flot >0.5/<1mm flot scanned; 5% flot<0.5mm scanned
4	5082	8418	8381		LR	pit	18	400	+++++/++++	++++ +	++++ +	++++ +	++	+			A	V rich cp assemblage (1000s grain (generally poorly preserved) & 1000s hulled wheat chaff; fragments; moderate weed seeds; mainly 6x hulled <i>Hordeum vulgare</i> & <i>Triticum dicoccum/spelta</i> ; some <i>T. aestivum</i> ; occ naked barley & <i>Avena</i> sp.; <i>T. diococcum</i> glume bases, <i>T. spelta</i> glume bases/rachis fragments; <i>Triticum</i> sp glume bases/spiklet forks/rachis; <i>Hordeum</i> sp rachis;



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		Avena sp awns; weeds <i>Bromus</i> sp++, <i>Rumex</i> sp+++ , <i>Agrostemma githago</i> , <i>Raphanus raphanistrum</i> , <i>Vicia/Lathyrus</i> sp., <i>Silene</i> sp., <i>Plantago lanceolata</i> , <i>Tripleurospermum inodirum</i> , <i>Anthemis cotula</i> , Poaceae indet (small), ; occ culm nodes/internodes; mod nos id'ble charcoal fragments; uncharred seeds (<i>Polygonum/Persicaria</i> sp., <i>Sambucus</i> sp.); occ small indet bone fragments; 25% flat <2mm scanned
4	5083	8454	8451		LR	ditch	30	45	++/++	+	+		+++++	+	+	++	D	Occ cpr (sorted) (<i>Triticum</i> sp. grain (1); indet grain (1) & fragments+, <i>Triticum</i> sp. glume bases (1); occ potentially id'ble charcoal fragments; >nos uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+++ , <i>Rumex</i> sp., <i>Polygonum/Persicaria</i> sp., <i>Ranunculus</i> sp., <i>Stellaria media</i> , <i>Sonchus</i> sp., <i>Carduus/Cirsium</i> sp., <i>Carex</i> sp.); > roots & fine sediment crumb; occ small indet bone frags, earthworm egg cases & molluscs; 50% flat <0.5mm scanned
4	5084	8461	8381		LR	pit	16	4	+++ /++++	++++	++	+++	+			+	B	Good cpr (but grain (100-150) poorly preserved, mainly <i>Triticum dicoccum/spelta</i> & possibly <i>T. aestivum</i> ; traces of <i>Hordeum vulgare</i> , <i>Avena</i> sp.; occasional chaff fragments (<i>T. spelta</i> glume bases; <i>Triticum</i> sp glume bases); mod nos of weed seeds (<i>Bromus</i> sp., <i>Rumex</i> sp., <i>Tripleurospermum inodirum</i> , <i>Anthemis cotula</i> ++, <i>Carex</i> sp., Poaceae indet (small), ; mod nos id'ble charcoal fragments; uncharred seeds (<i>Atriplex</i> sp., <i>Sambucus</i> sp.); occ molluscs
4	5085	8478	8477		LR	ditch	38	100	+++ /++++	++			+++++	+			D	Occ cpr (<i>Hordeum</i> sp. grain (2); indet grain (3) & fragments+); mod nos potentially id'ble charcoal fragments; >nos uncharred seeds (<i>Chenopodium/Atriplex</i> sp.++++, <i>Polygonum/Persicaria</i>



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		sp.++, <i>Sambucus</i> sp.); mainly roots & fine sediment crumb; occ small indet bone frags; 25% flat <0.5mm scanned
4	5090	8502	8498		LR	ditch	8	100	+++/>++++	+++	++		++++	++		+++	C	Moderate cpr (c 50 grains but poorly preserved & fragmentary & mostly indet. <i>Triticum dicoccum/spelta</i> , <i>Triticum</i> sp.; chaff c 10-20 frags - <i>Triticum spelta</i> glume bases, <i>Triticum</i> sp. glume/spikelet bases; moderate nos potentially id'ble fragments;> nos uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+++ , <i>Polygonum/Persicaria</i> sp.+++ , <i>Sambucus</i> sp. <i>Sonchus</i> sp., <i>Carduus/Cirsium</i> sp., <i>Carex</i> sp.); >roots & fine sediment crumb; occ v small indet bone frags & mod nos molluscs; 25% flat <0.5mm scanned
4	5092	8524	8523		LR	ditch	2	2	++/>++++				+++				F	NO cpr ; occ potentially id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.++, <i>Polygonum/Persicaria</i> sp.); mainly sediment crumb & roots
4	5091	8525	8523		LR	ditch	40	150	+++/>++++	+			++++	+++		++	D	Occ cpr (indet grain fragments); mod. potentially id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.++++ , <i>Polygonum/Persicaria</i> sp. ++ , <i>Rumex</i> sp.++, <i>Sambucus</i> sp., <i>Carex</i> sp.); mainly fine sediment crumb & > roots; mod nos small indet bone frags & molluscs; 50% flat<1mm scanned
4	5099	8539		8221	LR	ditch	40	72	+++/>++++	++	+		++++	+		+	D	Occ cpr (sorted) (cf <i>Triticum dicoccum/spelta</i> (1), ndet grain (5) & fragments +; <i>Triticum spelta</i> glume bases (1), <i>Triticum</i> sp. glume/spikelet bases (2); mod. potentially id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+++ , <i>Polygonum/Persicaria</i> sp.+++ , <i>Rumex</i> sp., <i>Sambucus</i> sp., <i>Rubus</i> sp.,



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		Carduus/Cirsium sp.); mainly roots, & fine sediment crumb; occ small indet bone frags & molluscs; 50% flot <0.5mm scanned
4	5100	8552		8221	LR	ditch	34	150	+++ /+++++	+	+		++++	++++	+	++	D	Moderate amount of charcoal (id'ble fragments); occ CPR (<i>Triticum</i> glume base (1), cf <i>Triticum</i> sp grain (2), indet grain fragments; Mainly fine sediment crumb/gravel & roots; uncharred seeds (> <i>Chenopodium/Atriplex</i> sp.; <i>Sambucus</i> sp., <i>Ranunculus</i> sp., <i>Rumex</i> sp., <i>Polygonum</i> sp., <i>Carduus/Cirsium</i> sp.; v fragmented bone (not id'ble) 50% flot <1mm scanned
4	5105	8558		8221	LR	ditch	34	65	+++ /+++++	++			++++	+	+	++	D	Mod amounts id'ble charcoal, cf <i>Triticum</i> sp. (1) indet grains (4), frags +; mainly roots Uncharred seeds (> <i>Chenopodium/Atriplex</i> sp. <i>Rumex</i> sp., <i>Polygonum</i> sp., <i>Ranunculus</i> sp.)
4	5119	8572		8221	LR	ditch	36	36	++ /++++				++++	+	+		F	NO cpr/ occ id'ble charcoal Mainly roots & fine sediment cmmmb/gravel; Uncharred seeds (> <i>Chenopodium/Atriplex</i> sp. > <i>Ranunculus</i> sp., <i>Polygonum</i> sp.)
4	5124	9399	9239		LR	grave	9	4	++ /+++++				++	++			F	NO cpr/ occ id'ble charcoal Mainly fine sediment cmmmb/gravel & v fragmented charcoal; Uncharred seeds (<i>Chenopodium/Atriplex</i> sp., <i>Urtica</i> sp., <i>Carex</i> sp.,



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments	
																		Polygonum sp.)	
4	5127	9470	9469		LR	pit	21	130	+++ /++++				+++	++				F	NO cpr / mod id'ble charcoal Mainly fine sediment cmmb/gravel & v fragmented charcoal; large & sm mammal bone frags Uncharred seeds (<i>Chenopodium/Atriplex</i> sp., > <i>Sambucus</i> sp.) 25% flat <0.5mm scanned
4	5126	9471	9469		LR	pit	37	140	+++ /++++				++++	++	+	++		F	NO cpr / mod id'ble charcoal Mainly fine sediment cmmb/gravel & v fragmented charcoal; large & sm mammal bone frags Uncharred seeds (> <i>Chenopodium/Atriplex</i> sp., > <i>Sambucus</i> sp.)
4	5158	10394	10393	10392	LR	grave	9	16	+ /++++				+++	+++		++		F	NO cpr / v occ id'ble charcoal Mainly roots & fine sediment cmmb/gravel Uncharred seeds (<i>Chenopodium/ Atriplex</i> sp.)
4	5159	10394	10393	10392	LR	grave	5	1	- /+++				++	++	+	+		F	NO cpr / id'ble charcoal Mainly roots & fine sediment cmmb/gravel Uncharred seeds (<i>Chenopodium/ Atriplex</i> sp.)
4	5160	10394	10393	10392	LR	grave	3	9	+ /+++				++	++		+		F	NO cpr / v occ pot id'ble charcoal; uncharred seeds (<i>Chenopodium/Atriplex</i> spp++, <i>Polygonum/Persicaria</i> sp); mainly fine sedimentary crumb & roots; occ. Molluscs



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
4	5161	10394	10393	10392	LR	grave	4	2	+/+++	+			+	++		+	D	V occ cpr (indet grain(1) & frags+), occ id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> spp); mainly fine sediment crumb; indet small bone frags & occ molluscs
4	5162	10394	10393	10392	LR	grave	5	6	+/+++				+	++++		+	F	NO cpr/occ id'ble charcoal; uncharred seeds (<i>Chenopodium/Atriplex</i> spp++, <i>Polygonum/Persicaria</i> sp); mainly v fragmented (flecks) bone (fine sedimentary crumb & roots; occ. Molluscs
4	5163	10394	10393	10392	LR	grave	5	4	+/+++				++	++		++	F	NO cpr/occ id'ble charcoal; uncharred seeds (<i>Chenopodium/Atriplex</i> spp++); mainly fine sediment crumb; v fragmented bone & Molluscs
4	5164	10394	10393	10392	LR	grave	3	18	-/+++				++	+++	+		F	NO cpr;/ id'ble charcoal; uncharred seeds (<i>Chenopodium/Atriplex</i> spp., <i>Rumex</i> sp., <i>Ranunculus</i> sp.); virtually all fine sediment crumb; v fragmented bone & Insects
4	5165	10394	10393	10392	LR	grave	1	<1	-/++					+	+		F	NO cpr;/ id'ble charcoal; fine sediment crumb & roots; occ v fragmented bone & Insects
4	5166	10394	10393	10392	LR	grave	2	3	+/+++					++++		+	F	NO cpr/v occ id'ble charcoal; mainly fine sediment crumb & v fragmented (flecks) bone; occ molluscs
4	5167	10394	10393	10392	LR	grave	1	<1	+/+					++	+		F	NO cpr; poss 1 frag of id'ble charcoal; occ v fragmented bone & Insects
3	5011	5103	5104		RB	pit	10	6	++/+++++			+	++++		+		D	v occ cpr (<i>Bromus</i> sp. (1)); occ id'ble charcoal fragments; mainly wl seeds (disturbed/wet ground) (<i>Rubus</i> sp., <i>Rumex</i> sp., <i>Polygonum aviculare</i> , <i>Coronopus squamatus</i> , <i>Chenopodium/Atriplex</i> sp.,



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		<i>Silene/Stellaria</i> sp., <i>Urtica dioica</i> , <i>Potentilla</i> sp., <i>Carex</i> sp., <i>Mentha</i> sp., <i>Juncus</i> sp.); occ insect fragments
4	5020	5726			RB	pit	40	200	+++++/++++	+		+	++++	+			D	v occ cpr (cf <i>Hordeum</i> sp., cf <i>Triticum</i> sp., <i>Prunus</i> sp. frag); mod nos id'ble charcoal fragments (including cf. <i>Quercus/Fraxinus</i> sp.); uncharred seeds (<i>Aethusa cynapium</i> , <i>Rubus</i> sp., <i>Rumex</i> sp., <i>Carex</i> sp., <i>Prunus domestica</i> , <i>Prunus</i> sp. <i>Corylus avellana</i>); >wood frags, occ bud frags; mainly fragmented wood, charcoal & sediment crumb; occ small mammal bone; 50% flot <1mm scanned
4	5015 Spit 1	5272	5273		RB	cremation	3	150	+++++/++++	+				+++			D	Virtually ALL charcoal (>nos id'ble fragments including round wood); 1-2 indet grains; small nos mainly burnt bone fragments; 5% flot <0.5mm scanned
4	5015 Spit 2	5272	5273		RB	cremation	5	300	+++++/++++	+				+++		+	D	Virtually ALL charcoal (>nos id'ble frags cf. <i>Quercus</i> sp., cf. <i>Quercus/Fraxinus</i> sp.); 2 <i>Triticum</i> sp.grains; small nos burnt bone fragments; occ molluscs; 5% flot <0.5mm scanned
4	5015 Spit 3	5272	5273		RB	cremation	5	100	+++++/++++				+	+++	+		F	NO cpr; virtually ALL charcoal (mod nos id'ble frags) & fine sediment crumb; occ uncharred seeds (<i>Rumex</i> sp.); small nos burnt bone & occ insect fragments; 5% flot <0.5mm scanned
4	5015 Spit 4	5272	5273		RB	cremation	3	5	+/++++					+		+	F	NO cpr; 1-2 potentially id'ble charcoal frags; mainly roots & fine sediment crumb & charcoal flecks; occ v small burnt bone fragments & molluscs
4	5039	6484	6439		RB	pit	20	200	++/++++	++++	++++	++++	+	+			A	RICH cpr (100+ grains - <i>Triticum dicoccum/spelta</i> , <i>T.aestivum</i> , <i>Triticum</i> sp., <i>Hordeum vulgare</i> , <i>Avena</i> sp.;



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		>chaff mainly hulled wheat chaff esp <i>T. spelta</i> glume bases, spikelet forks, rachis fragments, <i>Triticum</i> sp. glume bases, rachis fragments, <i>Hordeum</i> sp. rachis, <i>Avena</i> sp. awns, cereal awns; occ stems/culm nodes, loose coleoptiles; mod rich nos weed seeds esp <i>Bromus</i> sp. & <i>Anthemis cotula</i> ; also <i>Prunella vulgaris</i> , <i>Polygonum</i> sp., <i>Vicia/Lathyrus</i> sp., <i>Fallopia convolvulus</i> , <i>Medicago/Trifolium</i> sp., <i>Rumex</i> sp., <i>Tripleurospermum inodorum</i> , Poaceae indet); 1-2 potentially id'ble charcoal fragments; occ uncharred seeds (<i>Carex</i> sp.); mainly cpr and >silica; occ small indet bone frags
4	5037	6535	6534		RB	pit	20	400	+++++/+++++	++++ +	++++ +	++++	++++	++		++	A	RICH cpr (100s grains including well preserved grain - mainly <i>Triticum dicoccum/spelta</i> ; also <i>T.aestivum</i> , <i>Triticum</i> sp., <i>Triticum/Secale cereale</i> , <i>Hordeum vulgare</i> , <i>Avena</i> sp.); >chaff mainly hulled wheat chaff esp <i>T. spelta</i> glume bases, spikelet forks, rachis fragments, <i>Triticum</i> sp. glume bases, rachis fragments, <i>Avena</i> sp. awns; occ stems/culm nodes, loose coleoptiles; mod nos weed seeds esp <i>Bromus</i> sp. & <i>Anthemis cotula</i> but not > spp diversity; also <i>Agrostemma githago</i> , <i>Fallopia convolvulus</i> , <i>Medicago/Trifolium</i> sp., <i>Rumex</i> sp., Poaceae indet); mod nos id'ble charcoal fragments (including cf. <i>Quercus/Fraxinus</i> sp.); uncharred seeds (<i>Sambucus</i> sp.+++; <i>Chenopodium/Atriplex</i> sp., <i>Rubus</i> sp.++, <i>Apium</i> sp., <i>Urtica dioica</i> +++; <i>Prunus</i> sp. frags, <i>Conium maculatum</i> , <i>Carex</i> sp., <i>Eleocharis</i> sp., <i>Juncus</i> sp.) also >wood frags; mainly grain & chaff & some weeds (esp <i>Bromus/Avena</i> sp.) (part ?burnt storage deposit) & charcoal; occ small indet bone frags & molluscs; 50% flat <2.0mm scanned
4	5027	6703	6700		RB	pit	30	103	+++++/+++++	++++	++++	+++	++++			+	A	RICH cpr (>nos grains but poorly preserved &



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
											+							fragmented – mainly indet; id'ble grains mainly <i>Triticum dicoccum/spelta</i> ; also <i>T.aestivum</i> , <i>Triticum</i> sp., <i>Hordeum vulgare</i> , <i>Avena</i> sp.; chaff mainly hulled wheat chaff – <i>T. spelta</i> glume basess, spikelet forks, rachis fragments, <i>Triticum</i> sp. glume bases, <i>Avena</i> sp. awns; occ culm nodes; relatively small nos weed seeds - <i>Bromus</i> sp., <i>Rumex</i> sp., Poaceae indet., <i>Tripleurosermum inodorum</i> , <i>Anthemis cotula</i> , <i>Stellaria media</i>); nos id'ble charcoal fragments; uncharred seeds (<i>Sambucus</i> sp., <i>Polygonum/Persicaria</i> sp., <i>Chenopodium/Atriplex</i> sp., <i>Rubus</i> sp., <i>Hyoscyamus niger</i> , <i>Lemna</i> sp., <i>Urtica dioica</i> , <i>Carex</i> sp., <i>Juncus</i> sp.); mainly grain, chaff & fragmented charcoal ; occ molluscs; 25% flat <0.5mm scanned
4	5066	7931	7930		RB	pit	10	38	++/++++				++++	+		++	F	NO cpr/occ id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+++ , <i>Polygonum/Persicaria</i> sp., <i>Rumex</i> sp.); mainly sediment crumb; occ small indet bone fragments & molluscs; 50% flat <0.5mm scanned
4	5074	8375	8374		RB	cremation	5	5	++/++++				+	+++		+	F	NO cpr; occ id'ble charcoal frags; uncharred seeds (<i>Sonchus</i> sp., <i>Poaceae</i> indet); sediment crumb; small indet bone frags; occ molluscs
4	5093	8520			RB	clay layer	20	42	++/++++	+	+		++++	+			D	Occ cpr (indet grain fragments+, <i>Triticum</i> sp. glume base (1)); occ. potentially id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+++ , <i>Polygonum/Persicaria</i> sp.+++ , <i>Rumex</i> sp.++, <i>Ranunculus</i> sp.); > fine sediment crumb, roots & wl seeds; occ small indet bone frags
4	5094	8521			RB	clay	20	120	+++ /++++				++++	+++	+		F	NO cpr ; mod nos potentially id'ble charcoal fragments;



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	mol	CPR pot	comments
						layer												uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+++; <i>Polygonum/Persicaria</i> sp.++, <i>Rumex</i> sp., <i>Sonchus</i> sp.); mainly sediment crumb & roots; ; mod nos small indet bone frags & occ beetle fragments
4	5095	8522			RB	clay layer	27	60	+++/+++++	+			+++++	+	+		D	Occ cpr (indet grain fragments+); mod nos. potentially id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.+++; <i>Polygonum/Persicaria</i> sp. ++, <i>Sonchus</i> sp., <i>Sambucus</i> sp., <i>Rumex</i> sp.); > fine sediment crumb, roots & wl seeds; occ small indet bone & beetle frags
4	5101	8545	8544		RB	grave	5	4	-/+++				+++	+	+		F	NO cpr /id'ble charcoal Mainly roots & fine sediment cmm/gravels; Uncharred seeds (<i>Chenopodium/Atriplex</i> sp.; <i>Sambucus</i> sp., <i>Rumex</i> sp., <i>Polygonum</i> sp., <i>Stellaria</i> sp.)
4	5102	8547	8546		RB	grave	20	105	++/+++++	+			++++	+++			D	Occ id'ble charcoal, 2 indet grains Mainly roots & fine sediment cmm/gravels; Uncharred seeds (<i>Chenopodium/Atriplex</i> sp. <i>Rumex</i> sp., <i>Polygonum</i> sp) 50% flat <0.5mm flat scanned
4	5103	8549	8548		RB	grave	8	20	+/+++	+	+		+++	+++			D	v. occ id'ble charcoal, indet grains (2), <i>Galium cf aparine</i> (1) Mainly roots & fine sediment cmm/gravels; Uncharred seeds (<i>Chenopodium/Atriplex</i> sp. <i>Rumex</i> sp., <i>Polygonum</i> sp)



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
4	5121	8678	8677		RB	pit	20	165	++++/++++	+			+++	++		++	D	Mod amounts id'ble charcoal, cf. <i>Triticum</i> sp. (1) indet grain (1) & fragments + Mainly roots & fine sediment cmmb/gravel & fragmented charcoal; Uncharred seeds (<i>Chenopodium/Atriplex</i> sp., <i>Sambucus</i> sp., <i>Carduus/Cirsium</i> sp., 25% flot <0.5mm scanned
4	5128	9725	9724		RB	grave	7	17	+/++++				++	+++	+	+	F	NO cpr / 1-2 frags id'ble charcoal Mainly fine sediment cmmb/gravel Uncharred seeds (<i>Chenopodium/Atriplex</i> sp., > <i>Sambucus</i> sp.)
4	5129	9725	9724		RB	grave	8	50	-/+++				+	++++		+++	F	NO cpr / id'ble charcoal Virtually all fine sediment cmmb/gravel & also v frag bone Uncharred seeds (<i>Sambucus</i> sp., <i>Polygonum</i> sp., <i>Poaceae</i> indet small) 50% flot <0.5mm scanned
4	5130	9725	9724		RB	grave	3	19	-/+++				++	++		++	F	NO cpr / id'ble charcoal Virtually all fine sediment cmmb/gravel Uncharred seeds (<i>Chenopodium/Atriplex</i> sp., <i>Sambucus</i> sp., <i>Polygonum</i> sp., <i>P. lapathifolia</i> , <i>Persicaria</i> sp.)
4	5131	9725	9724		RB	grave	8	45	+/+++				++	++++	+	+++	F	NO cpr /v occ id'ble charcoal



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		Virtually all fine sediment cmmb/gravel & v frag bone (occ small mamm bone); moderate nos molluscs but fragmentary Uncharred seeds (<i>Chenopodium/Atriplex</i> sp., <i>Sambucus</i> sp., <i>Polygonum</i> sp.)
4	5132	9725	9724		RB	grave	4	13	-/+++				+	+++	+	++	F	NO cpr / id'ble charcoal Virtually all fine sediment cmmb/gravel Uncharred seeds (<i>Sambucus</i> sp.)
4	5133	9725	9724		RB	grave	3	8	-/+++				+	+++	+	++	F	NO cpr / id'ble charcoal Virtually all fine sediment cmmb/gravel Uncharred seeds (<i>Sambucus</i> sp.)
4	5134	9725	9724		RB	grave	3	5	-/++				+	+++			F	NO cpr / id'ble charcoal Virtually all fine sediment cmmb/gravel Uncharred seeds (<i>Sambucus</i> sp., <i>Carduus/Cirsium</i> sp., <i>Chenopodium/ Atriplex</i> sp)
4	5135	9841	9839	9838	RB	grave	4	11	+/+				+	++		++	F	NO cpr / v occ id'ble charcoal Virtually all fine sediment cmmb/gravel Uncharred seeds (<i>Sambucus</i> sp.)
4	5136	9841	9839	9838	RB	grave	10	22	+/+				++	++		++	F	NO cpr / v occ id'ble charcoal Virtually all fine sediment cmmb/gravel; v occ sm mamm bone



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		Uncharred seeds (<i>Sambucus</i> sp. <i>Chenopodium/ Atriplex</i> sp., <i>Polygonum</i> sp.)
4	5137	9841	9839	9838	RB	grave	8	12	+ / + + + +				++	++		+++	F	NO cpr / v occ id'ble charcoal Virtually all fine sediment cmmb/gravel Uncharred seeds (<i>Sambucus</i> sp., <i>Polygonum</i> sp., <i>Chenopodium/ Atriplex</i> sp)
4	5138	9841	9839	9838	RB	grave	4	14	+ / + + +				++	++	+	+++	F	NO cpr / v occ id'ble charcoal Virtually all fine sediment cmmb/gravel Uncharred seeds (<i>Sambucus</i> sp., <i>Chenopodium/ Atriplex</i> sp)
4	5139	9841	9839	9838	RB	grave	4	15	- / + + +				+			+++	F	NO cpr / id'ble charcoal Virtually all fine sediment cmmb/gravel Uncharred seeds (<i>Sambucus</i> sp.)
4	5140	9841	9839	9838	RB	grave	7	1	+ / + + + +				+			++	F	NO cpr / one frag id'ble charcoal Virtually all fine sediment cmmb/gravel, roots, charcoal flecks Uncharred seeds (<i>Sambucus</i> sp., <i>Chenopodium/ Atriplex</i> sp)
4	5141	9841	9839	9838	RB	grave	4	63	- / + + + +				+	++		++	F	NO cpr / id'ble charcoal Virtually all fine sediment cmmb/gravel Uncharred seeds (<i>Sambucus</i> sp., <i>Poaceae</i> indet (small))



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		24% flot <0.5mm scanned
4	5142	9841	9839	9838	RB	grave	3	10	+ /+++				++	++	+	+++	F	NO cpr / 1-2 frags id'ble charcoal Virtually all fine sediment cmmb/gravel, mod shell, charcoal Uncharred seeds (<i>Chenopodium/ Atriplex</i> sp)
4	5143	9841	9839	9838	RB	grave	3	56	+ /+++				+	++		+++	F	NO cpr / v occ frag id'ble charcoal Virtually all fine sediment cmmb/gravel Uncharred seeds (<i>Chenopodium/ Atriplex</i> sp) 50% flot <0.5mm scanned
4	5148	10117	10116		RB	cremation	33	200	+++++/+++++	+		+	+++	++		++	D	> amount id'ble charcoal, indet grain (2) & fragments+; <i>Rumex</i> sp. (2) Mainly fragmented charcoal Uncharred seeds (> <i>Chenopodium/ Atriplex</i> sp., <i>Persicaria</i> sp.) 25% flot <0.5mm scanned
4	5144	10120	10123		RB	grave	3	1	- /+++					++			F	NO cpr / id'ble charcoal Virtually all fine sediment cmmb/gravel
4	5145	10120	10123		RB	grave	4	23	++ /++++				+++	+++		+	F	NO cpr / v occ frag id'ble charcoal Virtually all fine sediment cmmb/gravel Uncharred seeds (> <i>Chenopodium/ Atriplex</i> sp)



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
4	5146	10120	10123		RB	grave	?	29	++/++++				++	+++		++	F	NO cpr / v occ frag id'ble charcoal Virtually all fine sediment cmmb/gravel Uncharred seeds (<i>Chenopodium/ Atriplex</i> sp., <i>Persicaria</i> sp.) 50% flot <0.5mm scanned
4	5147	10120	10123		RB	grave	15	3	++/++++				+++		+	+	F	NO cpr / occ frag id'ble charcoal Virtually all fine sediment cmmb/gravel & roots Uncharred seeds (<i>Chenopodium/ Atriplex</i> sp., <i>Carex</i> sp., <i>Sambucus</i> sp., <i>Stellaria</i> sp.)
4	5149	10120	10123		RB	grave	11	26	+/++++				+	++++		++	F	NO cpr / 1-2 frags id'ble charcoal Virtually all fine sediment cmmb/gravel & very frag bone Uncharred seeds (<i>Chenopodium/ Atriplex</i> sp.)
4	5150	10234	10235		RB	crema tion	12	200	+++++/+++++	+		+	+++	++++		+	D	>amount id'ble charcoal, indet grain (1) & fragments+; <i>Rumex</i> sp. <i>Ranunculus</i> sp. Virtually all fragmented charcoal; v small burnt bone fragments (occ small mamm bone frags) Uncharred seeds (> <i>Chenopodium/ Atriplex</i> sp., <i>Persicaria</i> sp.) 25% flot <0.5mm scanned
4	5152	10357	10355	10362	RB	ditch	5	87	-/++				+++				F	NO cpr / id'ble charcoal Virtually all fine sediment cmmb/gravel



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		Uncharred seeds (<i>Chenopodium/ Atriplex</i> sp., <i>Carex</i> sp., <i>Juncus</i> sp., <i>Polygonum</i> sp.)
4	5154	10425	10424		RB	grave	5	2	+ / ++				++	++		++	F	NO cpr / v occ id'ble charcoal Virtually all fine sediment cmmb/gravel & roots Uncharred seeds (<i>Chenopodium/ Atriplex</i> sp., <i>Sambucus</i> sp., <i>Rumex</i> sp., <i>Polygonum</i> sp.)
4	5155	10425	10424		RB	grave	5	6	- / +++				+	++++		+++	F	NO cpr / id'ble charcoal Virtually all fine sediment cmmb/gravel, v frag shell & bone frags Uncharred seeds (<i>Chenopodium/ Atriplex</i> sp.)
4	5156	10425	10424		RB	grave	10	30	- / +++				+++	++	+	+++	F	NO cpr / id'ble charcoal Mainly roots & fine sediment cmmb/gravel; very fragmented shell Uncharred seeds (<i>Chenopodium/ Atriplex</i> sp.)
4	5157	10425	10424		RB	grave	8	6	- / +++++				+++	+++	+	+++	F	NO cpr / id'ble charcoal Mainly fine sediment cmmb/gravel & v fragmented bone & shell Uncharred seeds (<i>Chenopodium/ Atriplex</i> sp. <i>Rubus</i> sp.)
4	5168	10485	10484		RB	pit	37	43	++ / +++++				++	++	+	+++	F	NO cpr/occ id'ble charcoal; mainly fine sediment crumb & v fragmented (flecks) charcoal; occ bone & insects; mod molluscs but fragmentary; 25% flat <0.5mm scanned



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
4	5169	10734	10706		RB	pit	40	195	+++++/++++	+			++++	++++		++	D	V occ cpr (<i>Triticum dicoccum/spelta</i> (1), indet frags+); > id'ble charcoal fragments; good w/ assemblage; > uncharred seeds (<i>Chenopodium/Atriplex</i> spp., <i>Urtica dioica</i> ++, <i>Conium maculatum</i> ++, <i>Coronopus squamatus</i> , <i>Rubus</i> sp., <i>Sambucus</i> sp.+++ , <i>Chenopodium/Atriplex</i> sp., <i>Carex</i> sp., <i>Ranunculus</i> sp.); Also >w'logged wood fgs++++; moderate nos small bone (including small mammal) frags & occ molluscs
4	5171	10770	10770		RB	cremation	1	3	+/++++					++			F	NO cpr/ occ possibly id'ble charcoal; mainly v fragmented charcoal (<2mm); occ (burnt) bone
4	5173	10779	10774		RB	cremation	19	2200	+++++/++++	++	++	++	++++	++++		++	C	FLOT VIRTUALLY ALL CHARCOAL Mod amounts cpr (c 20 grains - <i>Triticum dicoccum/spelta</i> (2), <i>Triticum</i> sp.(4), indet grain (4) & frags++; c 20 weed seeds - <i>Medicago/Trifolium</i> sp.(5), <i>Rumex</i> sp.(2), <i>Vicia/Lathyrus</i> sp.(1), indet seeds); >>id'ble charcoal including round wood (cf. <i>Fraxinus</i> sp., cf. <i>Quercus/Fraxinus</i> sp.); uncharred seeds <i>Chenopodium/Atriplex</i> sp.) Good nos of indet burnt bone fragments & occ molluscs 25% flat <2mm & <1mm scanned; 5% flat <1mm scanned
4	5174	10781	10780		RB	cremation	3	350	+++++/++++	++			+++	+		+	D	FLOT VIRTUALLY ALL CHARCOAL Occ cpr (c 5-10 grains - <i>Triticum dicoccum/spelta</i> (2), indet grain (3) & frags+; >id'ble charcoal (including including cf. <i>Quercus/Fraxinus</i> sp.); uncharred seeds <i>Chenopodium/Atriplex</i> sp.+++) Occ indet burnt bone fragments & molluscs



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		25% flot <1mm scanned
4	5175	10921	10920		RB	cremation	2	120	+++/++++				+++	++		+	F	NO cpr/mod nos id'ble charcoal; uncharred seeds (<i>Chenopodium/Atriplex</i> spp+++; <i>Polygonum/Persicaria</i> sp.+); mainly v fragmented charcoal; occ indet burnt bone frags & molluscs 5% flot <0.5mm scanned
5	12500	12567	12561		RB	water hole	27	700	-/++				++++				F	ORGANIC FLOT MAINLY WOOD (all sizes); no id'ble charcoal/cpr; mod nos 'waterlogged' seeds (<i>Urtica dioica</i> , <i>Aethusa cynapium</i> , <i>Ranunculus</i> sp.++, <i>Alnus</i> sp., <i>Rubus</i> sp., <i>Fumaria</i> sp., <i>Potentilla</i> sp., <i>Sonchus</i> sp., <i>Polygonum persicaria</i> , <i>Carex</i> sp.); <i>Corylus avellana</i> shell; >'w'logged wood fgs(>10mm++++, >4mm+++; <4mm+++++); 50% flot<1mm scanned
3	5003	5036	5037		undated	pit	10	6	-/+++				+	++	++	+	F	NO cpr/id'ble charcoal; uncharred seeds (<i>Carduus/Cirsium</i> sp., <i>Polygonum/Persicaria</i> sp.); mainly sediment crumb/gravel & roots; occ small indet bone & beetle fragments & molluscs
3	5004	5057	5058		undated	ditch	40	8	++/++++	+			+++	+	+		D	Occ cpr & id'ble charcoal fragments; <i>Triticum dicoccum/spelta</i> (3) (well preserved & sorted), <i>Triticum</i> sp.(1); uncharred seeds (<i>Rubus</i> sp. <i>Urtica dioica</i> , <i>Ranunculus Batrachium</i> , <i>Sambucus</i> sp., <i>Chenopodium/Atriplex</i> sp. <i>Potentilla</i> sp., <i>Sonchus</i> sp.); mainly roots & sediment crumb/gravel; occ small indet bone & beetle fragments
3	5006	5066	5068		undated	pit	-	-	+/-								F	CHARCOAL SAMPLE- several potential identifiable fragments >10mm



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
3	5007	5069	5070		undated	pit	20	10	++/++++	+		+	+				D	Occ cpr (indet grain (3) & fragments); occ id'ble charcoal fragments; uncharred seeds (<i>Chenopodium/Atriplex</i> sp.); mainly fragmented charcoal
3	5009	5087	5058		undated	ditch	10	98	++/+++	+	+		++++		+		D	MODERATELY RICH ORGANIC flot; v occ cpr (cf <i>Hordeum vulgare</i> , indet grain /occ id'ble charcoal fragments; >> wood fragments (various sizes) & wl seeds with mod spp diversity (disturbed/wet ground) (<i>Sambucus</i> sp., <i>Rubus</i> sp., <i>Rumex</i> sp., <i>Polygonum persicaria</i> , <i>P. aviculare</i> , <i>Chenopodium/Atriplex</i> sp., <i>Potentilla</i> sp., <i>Polygonum/Persicaria</i> sp., <i>Carduus/Cirsium</i> sp., <i>Ranunculus</i> sp., > <i>Ranunculus Batrachium</i> , <i>Carex</i> sp., <i>Chara</i> sp., <i>Mentha</i> sp., <i>Juncus</i> sp., <i>Eleocharis</i> sp.); occ insect fragments; 25% flot <0.5mm scanned
4	5032	6279			undated	pit	40	12	-/+++				+++			++	F	NO cpr/id'ble charcoal; uncharred seeds (<i>Carduus/Cirsium</i> sp., <i>Sambucus</i> sp., <i>Chenopodium/Atriplex</i> sp., <i>Lapsana communis</i> , <i>Polygonum/Persicaria</i> sp.); mainly fine sediment crumb & roots; occ molluscs
4	5104	8551	8550		undated	grave	3	2	-/++				+++	+	+		F	NO cpr /id'ble charcoal Mainly roots & fine sediment cmmmb/gravel; Uncharred seeds (<i>Chenopodium/Atriplex</i> sp.; <i>Sambucus</i> sp., <i>Polygonum</i> sp)
4	5172	10952			undated	cremation	4	130	+/++++	+	+	+	++++	+	+	+	D	V occ cpr (indet grain & frags+; <i>Triticum</i> sp. glume base (1), cf <i>Bromus</i> sp.(1)); occ id'ble charcoal fragments; good wl assemblage; > uncharred seeds especially <i>Sambucus</i> sp.+++ (<i>Chenopodium/Atriplex</i>



Area	sample	context	feature	group	dating	type feature	(l) proc. soil vol	flat vol (ml)	>/<2mm charcoal	grain chd	chd chaff	other chd	seeds unchd	bone	insect	moll	CPR pot	comments
																		spp., <i>Urtica dioica</i> +++; <i>Conium maculatum</i> ++; <i>Rubus</i> sp. ++; <i>Carex</i> sp., <i>Juncus</i> sp.++); Also >w/logged wood fgs+ +++++; occ small bone & beetle frags & occ molluscs; 25% flot<0.5mm scanned
5	12002	12009			undated		-	-	+++/-								F	CHARCOAL SAMPLE; id'ble charcoal (including cf. <i>Quercus/Fraxinus</i> sp.)

Key:

Phase: MIA = middle Iron Age; ER = early Roman (AD 43-120); MR = middle Roman (AD 120-240); LR = late Roman (AD 240+); RB = Romano-British

Frequency of items: + = <5; ++ = 5-25; +++ = 26-100; ++++ = 101-300; +++++ =>300 items

Pot CPR (potential of charred plant assemblages): A = rich (more than 300 identifiable items); B = good (100 to 300 identifiable items); C = moderate (50 to 100 identifiable items); D = poor (less than 50, usually less than 10 items); F (no identifiable charred plant remains)

Chd (charred); unchd (uncharred); moll (molluscs)

D.4 Waterlogged plant remains

Kath Hunter

Introduction

During excavations at Gill Mill (SLGM and DUGM), environmental bulk soil samples were taken for the recovery of environmental remains including plant macrofossils. Ninety-seven samples were assessed for waterlogged plant remains and the presence of insects. The samples were taken between 1988 and 2008 from several areas of excavation within the parishes of South Leigh and Ducklington and represented phases from middle Iron Age through to late Roman. This assessment characterises the type and condition of the plant remains preserved along with other environmental remains such as charred plants, insects and Mollusca. Samples are identified for full analysis which will potentially help to provide information about the local environment and changes in the character of the area through time.

Sampling, recovery and identification methods

A total of 97 environmental samples were selected in total for the assessment of waterlogged plant remains; 39 from Phase 1 work (DUGM) and 58 from SLGM. An assessment of nine samples from the 2005 excavations at SLGM for waterlogged and charred plant remains was also carried out by Wendy Smith (2005) the results are included in Table D.4.2. John Giorgi also recorded dried, formerly waterlogged remains within the flots of samples primarily floated for the recovery of charred material, and he noted the presence of some plant species not seen in the samples assessed specifically for waterlogged remains (Giorgi, above).

The samples assessed here were collected from a range of feature types, with pits and ditch fills being the most numerous. An Excel spreadsheet spread detailing the plant remains and other environmental remains noted in each sample will be included with the site archive.

The majority of the samples were from Roman contexts (86 in total - 31 from DUGM and 55 from SLGM) with three middle Iron Age samples from DUGM, four post-Roman and six as yet unphased samples.

In general, one litre sub-samples were processed using a bucket flotation technique through a 250 µm mesh although on occasion a much larger sample was processed by bulk flotation (to 0.25 mm flot and 0.5 mm residue) and retained wet only when waterlogged material was observed during processing. The resulting flots and residues were then retained and stored wet; those from the SLGM areas were stored in a purpose built cold store at approximately 4°C, while those from the DUGM phases of the project had been stored together with other material from the project, in an indoor warehouse. Approximately 20 ml from each flot was scanned (or the total flot if less) using a low powered microscope at magnification between x10-20. The presence and relative abundance of waterlogged and charred plant remain were recorded along with other insect, bone and molluscan remains. The frequency of charcoal and wood fragments larger and smaller than 2 mm were also noted. the larger pieces being potentially identifiable and suitable for analysis.

The item frequency of the charred plant material and other environmental remains was scored using the following scale: + = <5 items; ++ = 5-25 items; +++ = 26-100 items; ++++ = 101-300 items; +++++ = >300 items. The portion of charcoal/wood greater than 2 mm from the total frequency are shown in brackets in the tables. The potential of the waterlogged plant remains for full analysis was assessed using a number of criteria which include variety of taxa present,

quality of preservation, quantity, diagnostic potential of taxa, feature type, phasing security and the project research questions.

Results

Of the 97 sample scanned 32 samples were identified as having potential for full analysis with a further 7 possibly suitable, however, many of these samples appeared to contain similar suites of plant remains, so a reduced number have been prioritised for full analysis. An additional sample (DUGM95 28/5 sample 1) originally assessed for charred plant remains has been added to this list. These come from a range of features and cover all the phases of activity identified from the site. Full details are given by Phase (Tables D.4.1-4) and samples suggested for full analysis of the charred and waterlogged component are listed in Tables D.4.5 and D.4.6.

Overall the quality of preservation of the waterlogged remains was fairly good, but in some samples there was evidence of decay with numerous fine organic particles accompanying fragments of seeds etc. This suggests that the decay has occurred after the seeds etc. had become waterlogged rather than before. This may be due to a number of factors including changes in the level of the water table at the site. Unfortunately, some of the samples taken in the 1980s showed evidence of modern deterioration with mould growth in some of the flots.

Waterlogged plant remains

The preservation of the plant remains was variable with the majority of species represented having relatively robust seeds. However, *Rorippa nasturtium-aquaticum* (water-cress), also commonly represented in waterlogged contexts, is an exception to this which suggests that there is the potential for well preserved remains. The taxa present in almost all of the samples had elements of plant associated with either aquatic or waterside/wet habitats. Species such as *Chara* sp. (stonewort), a type of algae which produces distinctively robust oogonia, favours stagnant water and water edges. *Zannichellia palustris* (horned pond weed), *Potamogeton* sp. (pondweed) *Menyanthes trifoliata* (bogbean) and water-cress are also aquatic species. *Lycopus europaeus*, (gypsy wort), *Carex* spp (sedges) and *Juncus* spp (rushes) are species that are found next to or close to water. The last two could, however, equally be found growing in poorly drained grassland. The presence of *Prunella vulgaris* (selfheal) also suggests a drier terrestrial habitat, as does *Urtica dioica* (perennial nettle) present in the majority of the samples. Elements of a scrub or woodland margin environment are also evident with *Corylus avellana*, (hazel nut), *Prunus spinosa* (sloe) *Sambucus* sp. (elder) and *Rubus* spp. (bramble). The nine samples processed for waterlogged remains from SLGM05, assessed by Smith (undated) produced flots which varied in sized from 200 to 1200 ml, all with an abundance of wood and root fragments and moderate to well preserved herbaceous material (see below for her full assessment text). Weed seeds were present in most samples, commonly including *Chenopodium* (goosefoot), *Rumex* (dock) and *Stellaria media* (chickweed).

Charred plant remains

A relatively small number of samples produced charred remains and on the whole they were very poor assemblages. Two samples (SLGM sample 5072 (context 8238) and sample 5082 (context 8418)) originally assessed for waterlogged remains contained significant amounts of silicified cereal chaff with cereal grain fragments and a few charred wild/weed seeds such as *Anthemis cotula* (stinking chamomile). SLGM sample <4058> (context 4679) was also assessed by Smith (undated) as being rich in charred cereal grain consisting largely of *Hordeum* (barley) but also with some *Avena* sp. (oat), and possibly occasional *Triticum* sp.

(wheat), *Agrostemma gigatho* (corncockle) and *Stellaria media* (common chickweed). Additional sediment from this sample will require processing and this sample should be sorted and analysed for charred plant remains.

Summary and potential of the biological remains

The waterlogged plant remains

The preservation of the waterlogged plant remains from this site, though variable, has nevertheless resulted in the survival of material that will help to characterise the vegetation in the area through the period of occupation. Several habitat types are suggested on the basis of the assessment data and more detailed analysis will aim to expand this information.

A number of sites of similar date to Gill Mill have been excavated on the Upper Thames terraces and floodplain and many are summarised by Booth *et al.* (2007). In particular, they note that the period from around AD 25-150 was characterised by agricultural intensification, at the same time as increased flooding and alluviation were taking place. The location of the Gill Mill settlement, on the floodplain, is unusual and so it will be particularly important to characterise that landscape and any changes in it through the period of occupation. It is in this context that the waterlogged remains will be viewed. While the analysis of the charred assemblages and animal remains will provide the most useful information pertaining to the social and economic character of the site, the waterlogged plant remains, molluscs and insects have the greatest potential to build up a picture of the local environment.

In particular, it will be interesting to compare the assemblages from Gill Mill with those from contemporary sites along the Upper Thames such as Claydon Pike (Robinson 2007) Farmoor (Lambrick and Robinson 1978) and Yarnton (Hey and Timby forthcoming). John Giorgi's assessment of the charred plant remains has identified example of species not represented in this assessment. In particular, *Agrostemma githago* (corn cockle), field penny cress (*Thlaspi arvense*) and henbane (*Hyoscyamus niger*) are species commonly associated with human activity. Therefore the dried flots from up to 10 samples (depending on final phasing) from SLGM (5125, 5029, 5033, 5068, 5071, 5120, 5069, 5011, 5020, 5027, 12500, 5172) should be rapidly scanned for taxa additional to those recorded from the waterlogged flots, along with up to 13 of the waterlogged flots assessed by the author and t1 sample from SLGM05 assessed by Smith (see Table D.4.5).

Recommendations for further work by period: waterlogged plant remains

As above and Table D.4.5, on the basis of the assessment it is recommended that full analysis (including sorting and quantification) is carried out on 24 of the waterlogged plant assemblages outlined in Table D.4.5 (11 from DUGM and 13 from SLGM), and up to 2 flots are rapidly scanned to look for additional taxa, to help establish

- crop husbandry and processing activities
- the exploitation of wild food resources
- the character of the local environment
- changes in the environment through time

Middle Iron Age

Three samples from ditch fills of the DUGM Area 10 settlement ([2004] (sample 1) and [2025] (19) and one from evaluation context 36/3 in Trench 13) were assessed from this period. Though all samples contained frequent waterlogged plant remains, only sample 1 and the evaluation sample had any identifiable seeds of sufficient variety or diagnostic potential to be recommended for full analysis.

No samples for this phase were assessed from SLGM.

Early Roman

Two samples from SLGM, sample 1 (context 33) from Area 2 and sample 5013 (context 5187) from Area 3 were assessed from early Roman contexts. Both samples have potential for full analysis partially on the variety of plant taxa present and the low number of samples identified from this phase.

No samples for this phase were assessed from DUGM

Middle Roman

Fifteen samples from SLGM assigned to this phase were assessed (two by Wendy Smith). Seven ditch samples were assessed and three of these have been recommended for full analysis of their waterlogged plant remains. Head of conveyor sample 4019 (context 4314) and Area 3 samples 4013 (context 4155) and 5001 (context 5030), have been selected for full analysis based on the variety of plant taxa present along with considerations of feature type, area and phase.

From the six pit fill samples, one has been recommended for full analysis: Area 4 sample 5042 (context 6777)

The two remaining samples, Area 4 sample 5050 (grave fill 6879) and 5049 (wood 6878) did not contain plant remains of sufficient variety or diagnostic potential to merit further work, but the wood from the grave (sample 5049) should be identified by the wood specialist.

Sample 1 from pit fill 28/5 in DUGM Area 6-8 Trench 28, originally assessed for CPR, produced waterlogged plant remains firmly dated to this phase and is worth further work.

Late Roman

From 12 late Roman samples assessed from DUGM contexts, two ditch fills from Area 4 (sample 52 (3020/C/7) and sample 67 (3508)) are recommended for full analysis along with two pit fills, samples 55 (3049/A/6) and 61 (3005/C/3). These were selected for variety of plant taxa present along with considerations of feature type, area and phase.

Thirty-six samples were assessed (four by Wendy Smith) from contexts of this phase from SLGM; 27 pit fills, six ditch fills and three well fills. From these, four samples from pit fills have been selected for full analysis, as follows: Area 3 sample 4002 (4033), and Area 4 samples 4057 (4664), 5018 (5613) and 5021 (5809).

Two ditch fill samples were selected for full analysis from Area 3: samples 4010 (4092) and conveyor sample 4005 (4041). These samples have largely been selected based on the quality of preservation, variety and diagnostic potential. One sample from a well fill 4021(4159) and two (samples 4050 and 4051) from fills of well 4559, have also been selected for potential analysis, again based on the rich variety of plant taxa present, along with considerations of feature type, area and phase.

General Roman

The four ditch fill samples from DUGM Area 4 selected for further work out of the 14 samples assessed from this phase include samples 4 (2, from the evaluation phase), 64 (3501), 68 (3513) and 69 (3514). Again, the selection criteria were good preservation of waterlogged remains together with their potential to provide useful information about the general local environment.

Of the ten SLGM samples assessed (three by Wendy Smith) from this phase, none are recommended for full analysis, since while they contain well preserved assemblages of plant remains, the results are likely to replicate those from better phased samples elsewhere.

Undated

No unphased samples were selected for further analysis from either phase of work at Gill Mill.

SLGM: Recommendations for the analysis of insects

On the basis of the assessment it is recommended that full analysis (including processing retained sediment, sorting and quantification) is carried out on 6 samples to help establish

- the character of the local environment
- landuse
- the kinds of material represented by feature fills
- changes in the environment through time

The selection has been based not only on the presence of insects, as indicated in Table D.4.1, but also on the availability of flots and residues from sub-samples specifically processed for insects or the retention of extra sediment, since between 3 and 10L of sediment is required to enable interpretable insect assemblages to be recovered.

Samples identified for analysis of the insect assemblages include:

SLGM04 Middle Roman sample 4007 (4080) and late Roman pit fill sample 4014 (4176). 5-10L of sediment from all of these samples has been processed specifically for insects and the flots and residues retained wet.

SLGM05 Late Roman primary well fill 4050 (4576)

SLGM06: Middle Roman ditch fill sample 5001 (5030) - in this case 40L was originally processed and retained wet. Late Roman pit fill 5018 (5613).

SLGM08 Middle Roman ditch 12501 (12763).

DUGM: Recommendations for the analysis of insects

On the basis of the assessment it is recommended that full analysis (including processing retained sediment, sorting and quantification) is carried out on 6 samples to help establish

- the character of the local environment
- landuse
- the kinds of material represented by feature fills
- changes in the environment through time

The selection has been based not only on the presence of insects, as indicated in Table D.4.1, but

also on the availability of extra sediment, since between 3 and 10L of sediment is required to enable interpretable insect assemblages to be recovered.

While it is likely that insect remains recovered from these early phases of work will have suffered some deterioration, the preservation of remains is likely to be better in unprocessed sediment than in the previously processed waterlogged flots, which have been in storage for many years. DUGM90 samples 55 and 56 both come from Late Roman pit fill context 3049/A/6. Sample 55 has been shown to contain both insect remains and an interpretable assemblage of waterlogged plant remains. Sample 56 also contains interpretable pollen and has retained sediment. This excess sediment from one of these should therefore be submitted for insect analysis..

DUGM90 samples 68 (3513), 69 (3514) and 52 (3020) also include both insects and interpretable assemblages of waterlogged plant remains. Although only 1L in volume it is recommended that the insect assemblages from these flots should be scan-recorded even though no extra sediment exists. DUGM90 sample 1 (2004) from a middle Iron Age enclosure ditch, and DUGM89 sample 4 (2) also include insects and have some retained sediment. Sediment from these two samples should be processed and the flots also scan-recorded.

Preliminary assessment of nine samples from Phase 2 Area 4 contexts (SLGM05) by Wendy Smith (2005)

Methodology

Nine samples were taken during the excavation, dating to the Roman period, for the recovery of waterlogged plant remains. One litre of these samples taken were floated by hand; the flot was collected on a 250 micron mesh and retained in water. Because the flots were so large only a representative sample was scanned with a Leica stereo microscope and plant material was provisionally identified and recorded as present or abundant. Other material in the flot was noted.

Results and Conclusion

The samples processed for waterlogged remains produced flots varied in size from 200 to 1200 ml, all with an abundance of wood and root fragments and herbaceous material. Weed seeds were present in all samples, including *Chenopodium* (goosefoot), *Rumex* (dock),

Four of the samples contained charred plant material, all contained charcoal with sample <4058> (4679) being rich in charred cereal grain consisting largely of *Hordeum* (barley) but also with some *Avena* sp. (oat), and possibly occasional *Triticum* sp. (wheat), *Agrostemma gigatho* (corncockle) and *Stellaria media* (common chickweed)

The waterlogged plant remains from the feature deposits have moderate to good preservation and further analytical work should be undertaken by a specialist for further identification and quantification of the waterlogged remains.



Table D.4.1: Waterlogged plant remains from Iron Age features

Site code	Area	Sample no.	Context	Feature type	Phase	WPR				CPR					Comments	WPR Potential	CPR Potential	Full analysis WPR	Charcoal Potential	
						Plant remains	wild/weed	fruit/nut	wood	Plant remains	Charcoal	cereal grain	chaff	Bone						Insect	Shell
DUGM90	10	1	2004	lowest fill at W.end of enclosure ditch	MIA	****	**		****	*				*		<i>Urtica dioica</i> , <i>Carex</i> sp. <i>Apiaceae</i> . Very small woody fragments and roots.	?	P	?	P
DUGM90	10	19	2025	2nd of 5 pit fills	MIA	****	**			*				**	<i>Urtica dioica</i>	P	P	N	P	
DUGM88	10	1	36/3	lowest fill of ditch	MIA	***	**							*	very decayed, soily mostly roots. <i>Urtica dioica</i> . <i>Chara</i> sp. <i>Carex</i> sp. (<i>trigonous</i>), <i>Juncus</i> sp., cf <i>Lemna</i> sp.	f/P	P	?	P	



Table D.4.2: Waterlogged plant remains from Roman contexts

Site code	Area	Sample no.	Context	Feature type	Phase	WPR				CPR				Bone	Shell	Insect	Comments	WPR potential	CPR Potential	Full analysis	WPR	Charcoal Potential
						Plant remains	wild/weed	fruit/nut	wood	Plant remains	Charcoal	cereal grain	chaff									
DUGM90	4	73	3507	Ditch fill	LR		**				***						<i>Rubus</i> sp. cf. <i>conium</i> . Inident. Seed fragments	P	P	N	P	
DUGM88	2	2	3/1	Occupation layer Trench 2/1	LR	****	*		**	*		*		****			Frequent mollusc shell fragments. Charred cereal grain fragments indet. waterlogged remains very decayed. <i>Rumex</i> sp., <i>Laminales</i>	P	P	N	P	
DUGM88	2	4	18/3	Layer over stonework Trench 2/3	LR	***					****(*)		*	**			Very decayed. Mouldy.	P	P	N	P	
DUGM88	2	7	11/1	Occupation layer Trench 2/1	LR	*	*				****(*)			****			Frequent mollusc shell fragments. <i>Juncus</i> sp. Flot dried out. Iron pan like concretions on the charcoal.	P	P	N	P	
DUGM88	2	1	36/3	Bottom layer of ditch. Trench 10/3	ROM	***	**							*			Very decayed, soily mostly roots. <i>Urtica dioicadioica</i> , <i>Chara</i> sp. <i>Carex</i> sp. (trigonous), <i>Juncus</i> sp., cf. <i>Lemna</i> sp.	f/P	P	?	P	
DUGM88	2	9	101/B/1	last fill of 5 fills of well. Trench 2/13	ROM		*				*			****(*)			Abundant shell fragment few complete. <i>Urtica dioicadioica</i> .	P	P	N	P	
DUGM88	2	10	101/B/2	4th fill of 5 fills in well. Trench 2/13	ROM						****		***	****	*		Insect includes beetle, abundant mollusc shell fragments, frequent bone fragments. Mould	P	P	N	P	
DUGM88	2	11	101/B3	3rd fill of 5 fills in well. Trench 2/13	ROM						****(*)		***	*			Numerous tiny bone fragments. Mould on charcoal. ?coal, <i>Sambucus</i> sp.	P	P	N	P	
DUGM88	2	12	101/B/4	2nd fill of 5 fills in well. Trench 2/13	ROM		*				****(*)		**	****			Mould on charcoal, <i>Sambucus</i> sp. Bone includes burnt fragments and	P	P	N	P?	



Site code	Area	Sample no.	Context	Feature type	Phase	WPR				CPR				Bone	Shell	Insect	comments	WPR potential	CPR Potential	Full analysis WPR	Charcoal Potential
						Plant remains	wild/weed	fruit/nut	wood	Plant remains	Charcoal	cereal grain	chaff								
																fish bone.					
DUGM88	2	13	101/B/5	1st fill of 5 fills in well. Trench 2/13	ROM	*				*	****			***	*	Shell fragmentary. Charred seed fragment (legume like)	p	P	N	P	
DUGM89	4	4	2	2nd Layer of small ditch	ROM	****	**			*				(*)	*	Insect includes beetle. Very rooty. <i>Urtica urens</i> , <i>Stellaria</i> sp., <i>Juncus</i> sp., <i>Eleocharis</i> sp. <i>Rubus</i> sp., <i>Rumex</i> sp.	P/F	P	?N	P	
DUGM89	4	7	11	Ditch fill	ROM	****	*		*						*	Algae, Insect includes beetle. <i>Urtica dioica</i> , <i>Rubus</i> sp., <i>Juncus</i> sp.,	P	P	N	P	
DUGM89	A4	8	13	primary ditch fill	ROM	*****	*		***	*						Tree buds, <i>Lycopus europaeus</i> , <i>Rubus</i> sp., <i>Carex</i> sp. Decay evident.	P	P	N	P	
DUGM89	4	9	20/6/4	primary ditch fill	LR	****	*		***						*	Insect includes beetle. Algae, decay evident. <i>Ranunculus</i> (batracium sect), <i>Rubus</i> sp.	P	P	N	P	
DUGM89	A4	10	5/5	Pit fill	? ROM	****	*		*							Algae, roots, bud scale. Apiaceae. decay evident	P	P	N	P	
DUGM90	4	52	3020/C/7	2nd of 8 ditch fills	LR	***	***			*				*	***	<i>Urtica dioica</i> , <i>Juncus</i> sp., <i>Ranunculus</i> sp., cf. <i>Soncus</i> sp., Laminales, Apiaceae,	?	P	?	P	
DUGM90	4	56	3049/A/6	SE quadrant of pit 2nd of 7 fills	LR	****	*		***	*						Rooty, Decay evident. <i>Prunella vulgaris</i> , <i>Scirpus</i> sp., <i>Cirsium</i> sp., <i>Carex</i> sp., <i>Juncus</i> sp.	P/F	P	?	P	
DUGM90	4	59	3049/B/6	NW quadrant of pit 2nd of 7 fills	LR		**		***	*** (*)						Large bark fragments. <i>Prunella vulgaris</i> , <i>Juncus</i> sp., <i>Rumex</i> sp. <i>Carex</i> Sp.(Tri). Catkin	?	P	?	?	
DUGM90	4	61	3005/C/3	SW quadrant of pit 3rd of 4 fills	LR	*****	*			***						Very organic. Laminated deposit with Monocot stem fragments, <i>Urtica dioica/dioica</i> , <i>Eleocharis</i> sp., <i>Carex</i> sp. Cyperaceae. Charcoal very small fragments	?	P	?	P	



Site code	Area	Sample no.	Context	Feature type	Phase	WPR				CPR				Bone	Shell	Insect	comments	WPR potential	CPR Potential	Full analysis WPR	Charcoal Potential
						Plant remains	wild/weed	fruit/nut	wood	Plant remains	Charcoal	cereal grain	chaff								
DUGM90	4	64	3501	Ditch fill	ROM	*****	**		*								Seeds include <i>Polygonum</i> Sp., <i>Rubus</i> sp., <i>Sambucus</i> sp. Cyperaceae, Caryophyllaceae. Tree leaf scars	?	P	?	P
DUGM90	4	65	3512	possible ring ditch. Probably a pit	LR	*****	***										<i>Sambucus</i> sp.?modern	P	P	N	P
DUGM90	4	66	3511	Ditch fill	ROM	*****	*										Very organic abundant roots, Decay evident. <i>Ranunculus</i> sp. (Batracium type), <i>Rubus</i> sp., Tree leaf buds.	P	P	N	P
DUGM90	4	67	3508	Ditch fill	LR	****	**			*				(*)		Rooty, Decay evident. <i>Persicaria</i> cf. <i>maculosa</i> , <i>Ranunculus</i> (batracium sect), <i>Juncus</i> sp. <i>Stellaria</i> sp., <i>Chenopium</i> sp., cf. <i>Scirpus</i> sp.	P/ F	P	?N	P	
DUGM90	4	68	3513	Ditch fill	ROM	*****	***								**	<i>Urtica dioicadioica</i> , <i>Ajuga</i> cf. <i>repens</i> , <i>Ranunculus</i> sp. (Batracium sect.) <i>Sambucus</i> sp. insect remains inc. Beetle	?	P	?	P	
DUGM90	4	69	3514	Ditch fill	ROM	*****	***	*	*						*	Very organic lots of roots, Beetle type remains, <i>Rorippa nasturtium-aquaticum</i> , <i>Polygonum</i> cf <i>Hydropiper</i> , <i>Potamogeton</i> sp., <i>Rubus</i> sp. <i>Ranunculus</i> (batracium sect), <i>Chara</i> sp., <i>Juncus</i> sp., Nut/endocarp fragment.					
DUGM90	4	70	3515	Ditch fill	ROM	****	*									Woody roots and fragments. ? Alder cone fragment, Lamiales	P	P	P	N	
DUGM90	4	72	3517	Ditch	ROM	****	**									Rooty. Decay evident, Leaf bud scale, <i>Urtica dioicadioica</i> , <i>Lycopus europaeus</i> , <i>Juncus</i> sp., <i>Sambucus</i> sp. <i>Polygonum</i> sp.	P	P	N	P	
SLGM02	2	1	33	Post hole	ER	****	***		*	*					***	Abundant root . Decay evident. Live ? nematode. Insect <i>remains</i> include	P	P	?N		



Site code	Area	Sample no.	Context	Feature type	Phase	WPR				CPR				Bone	Shell	Insect	comments	WPR potential	CPR Potential	Full analysis WPR	Charcoal Potential
						Plant remains	wild/weed	fruit/nut	wood	Plant remains	Charcoal	cereal grain	chaff								
																beetle. <i>Juncus</i> sp., <i>Chenopodium</i> sp., <i>Rubus</i> sp., Apiaceae.					
SLGM04	3	4001	4045	pit/gully	RB	****	***			*					***	Insect includes beetle. Abundant dicot. Leaf fragments and roots. Hawthorn type spine Charred twigs noted. <i>Anthriscus</i> cf. <i>Silvestris</i> (cow parsley), <i>Urtica dioica</i> , <i>Juncus</i> sp., <i>Rubus</i> sp., <i>Eleocharis</i> sp., Asteraceae, Apiaceae,	F/P	P	?	P	
SLGM04	3	4002	4033	Pit	LR	***	***	*	*(*)	(*)					*	Dicot. Leaf fragments, twiggy wood. Charcoal inc. ring porous. HNS, <i>Rumex</i> sp. (in perianth), <i>Rubus</i> sp., <i>Juncus</i> sp., Cyperaceae, Caryophyllaceae.	F	?	?	?	
SLGM04	3	4003	4031	Pit	LR	****	**		****	*****(*)						Abundant small woody fragments. <i>Rubus</i> sp., <i>Carex</i> sp. (trigonous), <i>Juncus</i> sp., <i>Ranunculus</i> (batracium)	p	P	N	?	
SLGM04	3	4004	4077	Pit	RB	****	****		****(**)	**					**	<i>Urtica dioica</i> , <i>Chara</i> sp., <i>Sonchus</i> sp., <i>Atriplex</i> sp., <i>Rumex</i> sp. (with perianth), <i>Silene</i> sp., <i>Ranunculus</i> sp., <i>Carex</i> sp. (trigonous). Insects include beetle.	M	P	?	P	
SLGM04	3 (W)	4005	4041	Ditch	LR	**	**	*	**	*					*	Charred glume base. <i>Lycopus europaeus</i> , cf. <i>Prunus spinosa</i> , <i>Juncus</i> sp., <i>Ranunculus</i> sp., <i>Carex</i> sp. (Trigonous), <i>Rumex</i> sp., <i>Potamogeton</i> sp., Solanaceae, Asteraceae, Apiaceae (2 types),	G	?	Y	P	
SLGM04	3 (W)	4006	4059	Pit	MR	****	*		****	**			*			<i>Carex</i> (in perianth), Moss, Bone ? small mammal	P	P	N	P	
SLGM04	3 (W)	4007	4080	Pit	MR		**		**	*					*	Insect includes beetle. Plant remain preservation poor <i>Rumex</i> sp. (in	P	P	?N	P	



Site code	Area	Sample no.	Context	Feature type	Phase	WPR				CPR				Bone	Shell	Insect	comments	WPR potential	CPR Potential	Full analysis WPR	Charcoal Potential
						Plant remains	wild/weed	fruit/nut	wood	Plant remains	Charcoal	cereal grain	chaff								
																perianth), <i>Carex</i> sp. (trigonous), <i>Sambucus</i> sp., <i>Ranunculus</i> (batracium sect.), <i>Juncus</i> sp., <i>Eleocharis</i> sp., Cf. <i>Potentilla</i> sp.					
SLGM04	TF3	4008	4099	Ditch	LR	*****	***		**	*				*	*	Insect ?caddis fly larvae case. Abundant roots. Cf. <i>Menyanthes trifoliata</i> , <i>Cirsium</i> sp., <i>Carex</i> sp. (Trigonous), <i>Ranunculus</i> (batracium sect.), <i>Eleocharis</i> sp.	F	P	?	P	
SLGM04	TF3	4009	4104	Pit	RB	***			(*)					*	*	Insect includes beetle. Large fragments of wood. <i>Chara</i> sp., <i>Carex</i> sp., cf. <i>Potamogeton</i> sp.	F	P	?	P	
SLGM04	TF3	4010	4092	Ditch	LR	*****	*****		*					*	*	Insect includes beetle. <i>Lycopus europaeus</i> , <i>Urtica dioica</i> , <i>Juncus</i> sp., <i>Mentha</i> sp., <i>Sonchus</i> sp., <i>Cirsium</i> cf. <i>arvensis</i> , cf. <i>Menyanthes trifoliata</i> , <i>Carex</i> sp. (trigonous & biconvex), Caryophyllaceae,	F	P	?	P	
SLGM04	3	4011	4108	Ditch	LR	****	***		**	*				*	*	Insect includes beetle. <i>Lycopus europaeus</i> , <i>Sambucus</i> sp. <i>Carex</i> sp. (biconvex), Caryophyllaceae,	P	P	N	P	
SLGM04	3	4012	4109	Ditch	LR	****	***		*					*	*	Abundant roots. <i>Urtica dioica</i> , <i>Lycopus europaeus</i> . <i>Carex</i> sp. (trigonous), <i>Rubus</i> sp. Caryophyllaceae,	P	P	N	P	
SLGM04	3	4013	4155	Ditch	MR		***	*	****(*)	*** (**)	*	*				Some bone burnt. Charred wheat glume base and barley rachis fragments. Charcoal diffuse. Some remains partially charred/waterlogged. WPR Leaf abscission scars and buds, <i>Carex</i> sp.(trigonous), <i>Ranunculus</i> sp., HNS	G	F	?Y	?	
SLGM04	3	4014	4176	Pit	LR	*****	**		****(*)	****(*)				*	*	Insects includes beetle. Abundant	P/	P	?	F	



Site code	Area	Sample no.	Context	Feature type	Phase	WPR				CPR				Bone	Shell	Insect	comments	WPR potential	CPR Potential	Full analysis WPR	Charcoal Potential
						Plant remains	wild/weed	fruit/nut	wood	Plant remains	Charcoal	cereal grain	chaff								
																root/stem fragments . Charcoal includes ring porous. <i>Eleocharis</i> sp., <i>Carex</i> sp. (trigonous), cf. <i>Cirsium</i> sp.	F				
SLGM04	Head of conveyer	4015	4233	Pit	LR	**		** (**)		(*)						Very soily. Poor preservation of seeds. <i>Juncus</i> sp., <i>Carex</i> (biconvex), Apiaceae.	P	?	N	?	
SLGM04	Head of conveyer	4017	4269	Pit	LR	*				****(*)						<i>Carex</i> sp. Soily flot	P	P	N	?	
SLGM04	Head of conveyer	4018	4270	Pit	LR	**		*		*				*	Insect includes beetle. <i>Carex</i> sp. (in perianth), <i>Eleocharis</i> sp. <i>Juncus</i> sp., cf. <i>Sonchus</i> sp. Soily flot	P	P	N	P		
SLGM04	Head of conveyer	4019	4314	Ditch	MR	****	**	*(*)		**				*	Soily flot needs relieving. Abundant roots. <i>Lycopus europaeus</i> , <i>Urtica dioica</i> , <i>Eleocharis</i> sp. <i>Juncus</i> sp., <i>Rumex</i> sp. (in perianth), <i>Ranunculus</i> (batracium), Apiaceae, Caryophyllaceae.	F	P	?	P		
SLGM04	Head of conveyer	4020	4318	Pit	MR		*	*		*				*	<i>Lycopus europaeus</i> , <i>Ranunculus</i> (including batracium sect), Apiaceae. Very soily	P	P	N	P		
SLGM04	3	4021	4159	Well	LR	***	***	*	**	****(*)					***	Insect includes beetle and wing fragments. HNS, <i>Urtica dioica</i> , <i>Rumex</i> sp. (in perianth), <i>Juncus</i> sp., <i>Carex</i> sp. (biconvex), Apiaceae (two types), Caryophyllaceae. <i>Rubus</i> sp. type thorn. Tree leaf bud.	F	P	?	?	
SLGM06	3	5001	5030	Ditch	MR	****	***		***	*				**	*	Charred ? <i>Eriophorum</i> sp. Spindle	G	P	?Y	P	



Site code	Area	Sample no.	Context	Feature type	Phase	WPR				CPR				Bone	Shell	Insect	comments	WPR potential	CPR Potential	Full analysis WPR	Charcoal Potential
						Plant remains	wild/weed	fruit/nut	wood	Plant remains	Charcoal	cereal grain	chaff								
																fragment. Peaty degraded wood/leaf/stem fragments. Seeds show evidence of decay. <i>Urtica dioica</i> , <i>Lycopus europaeus</i> , <i>Anagalis</i> cf. <i>Tenella</i> , <i>Ranunculus</i> (batracium sect) <i>Mentha</i> sp., <i>Carex</i> ssp. (Biconvex&trigonus), cf. <i>Scirpus</i> sp., cf. <i>Cirsium</i> sp., cf. <i>Persicaria</i> sp., Asteraceae, Caryophyllaceae,					
SLGM06	3	5010	5081	Ditch	RB	***	****									Frequent <i>Ranunculus</i> (batracium sect.), <i>Zannichellia palustris</i> , <i>Lycopus europaeus</i> , <i>Urtica dioica</i> , <i>Juncus</i> sp., cf. <i>Cirsium</i> sp., Laminiales.	F	P	?		
SLGM06	TF3	5012	5181		LR		***	*	****		*				*	Dirty flot, Charred rachis fragment and glume base. HNS, <i>Lycopus europaeus</i> , <i>Urtica dioica</i> , <i>Ranunculus</i> (batracium sect.), <i>Carex</i> (trigonus), <i>Juncus</i> sp., <i>Sambucus</i> sp., <i>Mentha</i> sp., Caryophyllaceae, Cyperaceae	F	?	?	P	
SLGM06	3	5013	5187		ER		***		***	*						Charred legume (2mm), Red tinge to flot, Frequent roots. <i>Urtica dioica</i> , <i>Sambucus</i> sp., <i>Rumex</i> sp., <i>Carex</i> sp. (trigonus), <i>Ranunculus</i> (batracium sect), Caryophyllaceae	P/ F	P	?N	P	
SLGM06	4	5016	5294	Pit	LR	*	*		(*)						**	Insect includes beetle and fly pupae. A large piece of wood. Abundant monocot leaf/stem fragments. Moss, <i>Eleocharis</i> sp.	P	P	N	P	
SLGM06	4	5018	5613	Pit	LR	***	***				**(*)				*	Insect includes beetle. Matted/compressed monocot Leaf/stem fragments. <i>Lycopus europaeus</i> , <i>Carex</i> sp.(in perianth), <i>Ranunculus</i> (batracium Sect.), <i>Juncus</i>	F	P	?	?	



Site code	Area	Sample no.	Context	Feature type	Phase	WPR				CPR				Bone	Shell	Insect	comments	WPR potential	CPR Potential	Full analysis WPR	Charcoal Potential
						Plant remains	wild/weed	fruit/nut	wood	Plant remains	Charcoal	cereal grain	chaff								
																sp., <i>Rubus</i> sp., Caryophyllaceae.					
SLGM06	4	5019	5664	Pit	LR	***	*		***(*)	*					*	Abundant root fragments. decay evident. <i>Juncus</i> sp., <i>Atriplex</i> sp., cf. <i>Scirpus</i> sp.,	?	P	?	P	
SLGM06	5	5021	5809	Pit	LR	****	*		****(**)	***(*)				*		Very soily.?Resieve. cf. <i>Cirsium</i> sp. <i>Carex</i> sp. (Biconvex),	?	P	?	?	
SLGM06	4	5026	6081	Pit	LR	****	***		****(***)	*						Charred glume base. Waterlogged decay evident. Tree bud scales. <i>Sambucus</i> sp., <i>Juncus</i> sp., <i>Rubus</i> sp., <i>Carex</i> sp. (trigonous), cf. <i>Eleocharis</i> sp.	?	?	?	P	
SLGM06	4	5029	6051	Pit	LR		****		**	***						Abundant <i>Juncus</i> sp. Seeds, cf. Solanaceae.	P	P	N	P	
SLGM06	4	5030	6375	Pit	LR		**		*****	*						Very organic.Decay evident. <i>Urtica dioica</i> , <i>Juncus</i> sp., <i>Eleocharis</i> sp., <i>Carex</i> sp. (trigonous), Apiaceae	P	P	N	P	
SLGM06	4	5033	6333	Pit	LR	*			*	***						Tree bud. <i>Urtica dioica</i> , <i>Juncus</i> sp., <i>Eleocharis</i> sp.,	P	P	N	P	
SLGM06	4	5034	6334	Pit	LR	****			****	*					*	Charred- Glume base. <i>Carex</i> (trigonous). Larvae. Waterlogged-abundant twigs , bud scales. <i>Eleocharis palustris</i> , <i>Rumex</i> sp. (in perianth), <i>Juncus</i> sp. <i>Rubus</i> sp., <i>Carex</i> sp.(trigonous) Apiaceae,	P/ F	?	?	P	
SLGM06	4	5037	6535	Pit	RB		**		*							Charred Wheat/barley awns, glume base free threshing rachis, <i>Anthemis cotula</i> seed. Waterlogged: <i>Urtica dioica</i> , <i>Juncus</i> sp., <i>Sambucus</i> sp., Apiaceae,	P/ F	F/ G	?N	P	
SLGM06	4	5041	6688	Pit	LR		**		****							Bark fragments and twigs. Soily.	P	P	N	P	



Site code	Area	Sample no.	Context	Feature type	Phase	WPR				CPR				Bone	Shell	Insect	comments	WPR potential	CPR Potential	Full analysis WPR	Charcoal Potential
						Plant remains	wild/weed	fruit/nut	wood	Plant remains	Charcoal	cereal grain	chaff								
																<i>Juncus</i> sp. <i>Carex</i> sp.(trigonus & biconvex), <i>Rumex</i> sp., laminales.					
SLGM06	4	5042	6777	Pit	MR		***							*		<i>Urtica dioica</i> frequent, <i>Lycopus europaeus</i> , <i>Mentha</i> sp., <i>Eleocharis</i> sp., <i>Rubus</i> sp.	P	P	N	P	
SLGM06	4	5044	6688	Pit	LR	****	**		****(*)							Abundant roots./ monocot leaf fragments. <i>Carex</i> sp., <i>Juncus</i> sp., <i>Rumex</i> sp.(with perianth), <i>Malva</i> sp., ? legume fragments	F	P	?	P	
SLGM06	4	5049	6878	Wood	MR	**	*		(*)							Very large fragments of wood.	?	P	?	P	
SLGM06	4	5050	6879	Grave	MR	**	**		*		*			***	**	Small bone fragments. <i>Urtica dioica</i> , <i>Juncus</i> sp.. Degraded of <i>Carex</i> sp. nutlet	P	P	N	P	
SLGM06	4	5054	6998	Grave	RB	***	*		*		*			***	*	Insect includes beetle. ? Modern roots, Asteraceae, Degraded seeds	P	P	N	P	
SLGM06	4	5056	7092	Pit	LR	*****	*		**** (***)		**** (****)				*	Insect includes ?larvae. Cut wood/Charcoal some partially charred round wood, some ring porous/difuse.HNS, <i>Aethusa cynapium</i> , <i>Carex</i> sp. (trigonus), <i>Rubus</i> sp., <i>Ranunculus</i> sp., <i>Eleocharis</i> sp., <i>Sambucus</i> sp., <i>Juncus</i> sp., Apiaceae, Asteraceae.	G/ F	P	?	Y G	
SLGM06	4	5063	7696	Pit	LR		*		***		***(*)			*		Very humic, Laminated monocot. Leaf fragments, Decay evident, <i>Rumex</i> sp. (in perianth), <i>Eleocharis</i> sp.	P/ F	P	N?	?	
SLGM06	4	5065	7775	Pit	LR		*		*		****			*		Burnt bone. <i>Sambucus</i> sp., <i>Juncus</i> sp.	P	P	N	P	
SLGM06	4	5068	7999	Pit	LR		**		**		***					Abundant decayed plant remains. <i>Urtica dioica</i> , <i>Persicaria</i> sp. Caryophyllaceae.	P	P	N	P	



Site code	Area	Sample no.	Context	Feature type	Phase	WPR				CPR				Bone	Shell	Insect	comments	WPR potential	CPR Potential	Full analysis WPR	Charcoal Potential
						Plant remains	wild/weed	fruit/nut	wood	Plant remains	Charcoal	cereal grain	chaff								
SLGM06	4	5069	8116	Kiln(PIT)	LR	****	*									Abundant stem fragments(?Apiaceae type). <i>Lycopus europaeus</i> , Apiaceae	P	P	N	P	
SLGM06	4	5070	8187	Pottery kiln(PIT)	LR		*		****(**)		***(**)					Ring porous charcoal. Waterlogged wood with bark, Cf. <i>Rosa</i> sp. type thorn, Indet seed	P	P	N	F	
SLGM06	4	5072	8238	Pit	LR						**	****				Very similar to sample 5082. Abundant silicified and charred wheat/barley awns. Waterlogged remains decayed no seeds noted.	P	G	N	P	
SLGM06	4	5082	8418	Pit	LR					*	**	****				Abundant silicified and charred wheat/barley awns. <i>Anthemis cotula</i> . Waterlogged remains decayed no seeds noted.	P	G	N	P	
SLGM06	4	5120	8401	Pit	LR	**	*		*		***					<i>Urtica dioica</i> , <i>Juncus</i> sp., Cyperaceae	P	P	N	P	
SLGM06	4	5123	8897	Ring ditch	MR		****				*	*	**			Bone includes mammal fragments and fish. Flot and residue scanned. Flot-Charred oat floret <i>Avena cf. sativa</i> , Waterlogged: abundant <i>Urtica dioica</i> , <i>Carex</i> sp. Caryophyllaceae. Residue - <i>Sambucus</i> sp.	F	F	?	P	
SLGM06	4	5125	8937	Ring ditch	MR		*			*	**			*		? Charred seed indet. Waterlogged: <i>Urtica dioica</i> , <i>Rubus</i> sp., Cyperaceae.	P	P	N	P	
SLGM06	4	5126	9471	Pit	LR	*	***				****(*)			**		Bone includes mammal fragments small mammal and fish bone. Frequent <i>Sambucus</i> sp. Seeds and modern roots	P	P	N	F	
SLGM06	4	5169	10734	Pit	RB	**	**				***(*)			*	*	Insect includes beetle. Rooty, decay evident. <i>Urtica dioica</i> , <i>Sambucus</i> sp., cf. <i>Conium maculatum</i> , Apiaceae (x2)	P/ F	P	?	?	
SLGM08	5	12500	12567	Waterhole	RB	****	*		****(**)							Abundant roots, stem fragments some	P	P	N	P	



Site code	Area	Sample no.	Context	Feature type	Phase	WPR				CPR				Bone	Shell	Insect	comments	WPR potential	CPR Potential	Full analysis WPR	Charcoal Potential
						Plant remains	wild/weed	fruit/nut	wood	Plant remains	Charcoal	cereal grain	chaff								
																woody, Indet.seed fragments.					
SLGM08	5	12501	12763	Ditch	MR	****				****				*	*	Abundant <i>Chara</i> sp. <i>Juncus</i> sp. Occasional. Other seeds fragmentary.	?	P	?	P	
SLGM08	5	12549	12647	Ditch	MR	***				***	*					Two samples scanned in error combined results. One contained Iron concretions on roots a few very small charcoal fragments and a possible Leaf bud scale. The other very small flot contained abundant <i>Juncus</i> seeds. Other seeds occasional included <i>Stellaria</i> sp. Decay evident.	P	P	N	P	
DUGM90	4	55	3049/A/6	SE quadrant of pit 2nd of 7 fills	LR	*****	*		***	*		*			*	<i>Prunella vulgaris</i> , <i>Carex</i> sp., <i>Ranunculus</i> sp. Charred monocot stems possible straw or other grass type. Beetle type. (sample 55)	?	?	?	P	
SLGM06	3	5008	5083	Ditch		***	***		(*)					**	*	Two large root fragments, <i>Prunella vulgaris</i> , <i>Zannichellia</i> sp., <i>Callitriche</i> sp., <i>Ranunculus</i> (batracium sect), <i>Rumex</i> (with perianth), Asteraceae	F	P	?	P	
DUGM90	4	57	3451	Layer below Roman road	Rom/ pre-Roman	**				****						Decay	P	P	N	P	
SLGM05	4	4050	4576	Second of 3 fills within stone-lined shaft of well 4559	LR	***				*						<i>Agrostemma gigatho</i> , <i>Stellaria media</i> , <i>Rumex</i> sp., <i>Chenopodium</i> sp.	F	P	Y	P	
SLGMO5	4	4051	4577	earliest of 3 fills within stone-lined shaft of well 4559	LR	*				*						<i>Stellaria media</i> ; fruitstone	F	P	Y	P	
SLGM05	4	4052	4583	Fill of Pit 4585	LR				**									F	P	Y	P
SLGM05	4	4057	4664	Fill of pit 4662	LR	****	****		**							<i>Stellaria media</i> , <i>Rumex</i> sp.,	F	P	Y	P	



Site code	Area	Sample no.	Context	Feature type	Phase	WPR				CPR				Bone	Shell	Insect	comments	WPR potential	CPR Potential	Full analysis WPR	Charcoal Potential
						Plant remains	wild/weed	fruit/nut	wood	Plant remains	Charcoal	cereal grain	chaff								
																Chenopodium sp.					
SLGM05	4	4053	4589	Fill of pit 4586	ROM	**	**									Chenopodium sp.	F	P	Y	P	
SLGM05	4	4054	4623	Fill of pit 4621	ROM	****	*		****									F	P	Y	P
SLGM05	4	4055	4639	Fill of Pit 4642	MR	****	**		****									F	P	Y	P
SLGM05	4	4056	4656	Fill of pit/whole 4658	MR	****	*		****			**						F	P	Y	P
SLGM05	4	4058	4679	fill of pit 4677	ROM	*	**			*	***					Chenopodium sp., Stellaria media. Charred grain includes <i>Hordeum vulgare</i> , <i>Avena</i> sp. and <i>Triticum</i> sp..	F	G	Y	P	



Table D.4.3: Waterlogged plant remains from post-Roman contexts

Site code	Area	Sample	Context	Feature type	WPR				CPR				Bone	Insect	Shell	Comments	WPR potential	CPR Potential	Full analysis WPR	Charcoal Potential
					Plant remains	wild/weed	fruit/nut	wood	Plant remains	Charcoal	cereal grain	chaff								
DUGM88		8	22/1	upper layer alluvium						***				***		P	P	N	P	
DUGM90	A4	58	3452	Alluvium		*		**					*			p	p	n	p	
DUGM93	A6-8	3	8/9	Alluvial layer /palaeochannel fill	****	*							*	*		P	P	N	P	



Table D.4.4: Waterlogged plant remains from undated contexts

Site code	Area	Sample no.	Context	Feature type	WPR				CPR				Bone	Insect	shell	comments	WPR potential	CPR Potential	Full analysis WPR	Charcoal Potential
					Plant remains	wild/weed	fruit/nut	wood	Plant remains	Charcoal	cereal grain	chaff								
DUGM88	2	3	104/3	Alluvium /? palaeochannel fill Trench 2/3	*	*				****						Dicot leaf. <i>Juncus</i> sp.	P	P	N	P
DUGM88	2	5	105/3	Alluvium /? palaeochannel fill Trench 2/3	**	**				***		*		****	Abundant small mollusc shell fragments. bone fragments. <i>Carex</i> sp. (trigonous), <i>Juncus</i> sp., <i>Chara</i> sp.	P	P	N	P	
DUGM88	2	6	2/1	Sub soil trench2/1	*				*	****					Tiny flot. <i>Atriplex</i> sp., Charred anorphous fragment.mould	P	P	N	P	
DUGM89 4	4	5	4/4	Large Ditch fill	****	*								***	Decay evident. <i>Carex</i> sp., Cyperaceae	P	P	N	P	
DUGM90	4	63	3006/A/3	post hole fill		**		*		** (*)					<i>Prunella vulgaris</i> , <i>Eleocharis</i> sp. <i>Juncus</i> sp. <i>Cruciferae</i> . Variety/environ indicators	m	p	?Y	m	
DUGM90	4	71	3516	possible pond	****			***		*					Waterlogged wood, Roots, leaf fragments	P	P	N	P	
SLGM06	3	5006	5066	post hole fill					*	****(**)	*		*		Near intact articulated beetle ?modern contaminant. Charred cereal grain fragment, charred Poaceae seeds (x2)	P	P	N	F	

Table D.4.5: Samples recommended for further analysis

Site code	Area	Sample no.	Context	Feature type	Phase	Full analysis?	Comments
DUGM88	10	1	36/3	Bottom layer of ditch.Trench10/13	MIA	Y	
DUGM90	10	1	2004	lowest fill at W.end of enclosure ditch	MIA	Y	Process new sample
DUGM95	6-8	1	28/5	Pit	MR	Y	
DUGM90	4	55	3049/A/6	SE quadrant of pit 2nd of 7 fills	LR	Y	Either this or sample 56
DUGM90	4	61	3005/C/3	SW quadrant of pit 3rd of 4 fills	LR	Y	Process new sample
DUGM90	4	52	3020/C/7	2nd of 8 ditch fills	LR	Y	
DUGM90	4	67	3508	Ditch fill	LR	Y	
DUGM89	4	4	2	2nd Layer of small ditch	ROM	Y	New sample could be processed
DUGM90	4	64	3501	Ditch	ROM	Y	Process new sample
DUGM90	4	68	3513	Ditch	ROM	Y	
DUGM90	4	69	3514	Ditch	ROM	Y	
SLGM06	3	5013	5187		ER	Scan	
SLGM04	3 (W)	4007	4080	Pit	MR	Scan	
SLGM04	3	4013	4155	Ditch	MR	Y	
SLGM06	3	5001	5030	Ditch	MR	Y	
SLGM04	Head of conveyor	4019	4314	Ditch	MR	Y	Resieve
SLGM06	4	5042	6777	Pit	MR	Y	
SLGM06	4	5123	8897	Ring ditch	MR	Scan	
SLGM08	5	12501	12763	Ditch	MR	Scan	
SLGM04	3 (W)	4005	4041	Ditch	LR	Y	
SLGM04	3	4002	4033	Pit	LR	Y	
SLGM04	3	4014	4176	Pit	LR	Scan	
SLGM04	3	4008	4099	Ditch	LR	Scan	
SLGM04	3	4010	4092	Ditch	LR	Y	
SLGM04	3	4021	4159	Well	LR	Y	
SLGM05	4	4050	4576	2nd fill in well 4559	LR	Y	

<i>Site code</i>	<i>Area</i>	<i>Sample no.</i>	<i>Context</i>	<i>Feature type</i>	<i>Phase</i>	<i>Full analysis?</i>	<i>Comments</i>
SLGM05	4	4051	4577	1st fill in well 4559	LR	Y	
SLGM05	4	4057	4664	one of 4 fills in pit 4662	LR	Y	
SLGM06	4	5063	7696	Pit	LR	Scan	
SLGM06	4	5012	5181	Pit	LR	Scan	Resieve
SLGM06	4	5018	5613	Pit	LR	Y	
SLGM06	4	5026	6081	Pit	LR	Scan	
SLGM06	4	5034	6334	Pit	LR	Scan	
SLGM06	4	5021	5809	Pit	LR	Y	Resieve
SLGM04	3	4001	4045	Pit/gully	RB	Y	
SLGM04	3	4004	4077	Pit	RB	Y	
SLGM04	3	4009	4104	Pit	RB	Scan	
SLGM06	3	5008	5083	Ditch	RB	Scan	
SLGM05	4	4058	4679	fill of pit 4677	RB	Y	
SLGM06	4	5169	10734	Pit	RB	Scan	
SLGM06	4	5011	5103	pit 5104	RB	Scan	ex CPR, riffle flot
SLGM06	4	5020	5726	pit 5724	RB	Scan	ex CPR, riffle flot
SLGM06	4	5027	6703	pit 6700	RB	Scan	ex CPR, riffle flot
SLGM06	4	5029	6151	pit 6134	LR	Scan	ex CPR, riffle flot
SLGM06	4	5033	6333	pit 6278	LR	Scan	ex CPR, riffle flot
SLGM06	4	5068	7999	pit 8000	LR	Scan	ex CPR, riffle flot
SLGM06	4	5069	8116	pit 8103	LR	Scan	ex CPR, riffle flot
SLGM06	4	5071	8190	pit 8131	LR	Scan	ex CPR, riffle flot
SLGM06	4	5120	8401	pit 8400	LR	Scan	ex CPR, riffle flot
SLGM06	4	5125	8937	pit 8936	MR	Scan	ex CPR, riffle flot
SLGM06	4	5172	10773?	fill of vessel SF5954	?	Scan	ex CPR, riffle flot
SLGM09	5	12500	12567	waterhole 12561	MR	Scan	ex CPR, riffle flot



Table D.4.6: Sample recommended for full analysis for charred plant remains

Site code	Area	Sample no.	Context	Feature type	Phase	WPR				CPR				Bone	Shell	Insect	comments	WPR potential	CPR Potential	Full analysis WPR	Charcoal Potential	
						Plant remains	wildweed	fruit/nut	wood	Plant remains	Charcoal	cereal grain	chaff									
SLGM06	4	5072	8238	fill of pit 8231	LR							**	****				Very similar to sample 5082. Abundant silicified and charred wheat/barley awns. Waterlogged remains decayed no seeds noted.	P	G	N	P	CPR
SLGM06	4	5082	8418	fill of pit 8381	LR					*		**	****				Abundant silicified and charred wheat/barley awns. <i>Anthemis cotula</i> . Waterlogged remains decayed no seeds noted.	P	G	N	P	CPR
SLGM05	4	4058	4679	fill of pit 4677	ROM	*	**			*		***					<i>Chenopodium</i> sp., <i>Stellaria media</i> . Charred grain includes <i>Hordeum vulgare</i> , <i>Avena</i> sp. and <i>Triticum</i> sp..	F	G	Y	P	CPR

D.5 Pollen

Elizabeth Huckerby

Introduction

A total of twelve pollen samples were assessed from SLGM and DUGM. The SLGM samples were four from the main fill (4159) of a late Roman stone-lined waterlogged well/waterhole (4162) and one and three respectively from the primary fill (10150) and secondary (principal) fill (10143) of a late Roman waterlogged pit (10141), both in Area 4. Single samples came from late Roman pits and ditches excavated in Area 4 of the Phase 1 (DUGM) works. The pollen samples from feature 10141 were taken from a monolith sample (5153) but those from feature 4162 were taken as a sequence of individual samples. Since no dedicated pollen samples were taken from the DUGM phases of work, the assessed sub-samples were taken from inside clods of earth within several waterlogged bulk samples from the lower fills of ditches and two large, adjacent pits. Since all samples had been in store for a number of years, the principal aim of this assessment was to determine the condition/preservation, quantity and variety of any extant pollen and to make recommendations for any further analysis..

Methodology

All samples were prepared for pollen analysis using a standard chemical procedure (method B of Berglund and Ralska-Jasiewiczowa 1986), using HCl, NaOH, sieving, HF, and Erdtman's acetolysis, to remove carbonates, humic acids, particles >170 microns, silicates, and cellulose, respectively. The samples were then stained with safranin, dehydrated in tertiary butyl alcohol, and the residues mounted in 2000 cs silicone oil. Slides were examined at a magnification of 400x (1000x for critical examination) by ten equally-spaced traverses across at least two slides to reduce the possible effects of differential dispersal on the slide (Brooks and Thomas 1967). The number of pollen grains, fern spores and *Lycopodium* marker spores were recorded and a note made of the preservation of the pollen and the presence of charcoal. Tablets with a known concentration of *Lycopodium* spores (Stockmarr 1971) were added to a known volume of sediment at the beginning of the preparation so that pollen concentrations could be calculated. The results are presented in Tables D.5.1 (SLGM) and D.5.2 (DUGM).

Results and discussion

SLGM (Table D.5.1)

Pollen was recorded in the samples taken from both features with concentrations of between 98,380 and 11,268 per ml of sample. The preservation of the pollen in all the samples was either good or good-mixed. The pollen assemblages recorded in all the samples suggest a cleared landscape with grassland/pasture, waste ground and some cereal cultivation.

DUGM (Table D.5.2)

Pollen in the samples taken during excavations in 1990 was recorded in concentrations of between 164,800 and 927 per ml of sample. The preservation of the pollen varied from good or good-mixed in the pits and but was poor in the two ditches. The pollen assemblages recorded in the pit samples suggest a cleared landscape with grassland/pasture, waste ground and some cereal cultivation. The pollen recorded in the ditch fills also suggest a cleared landscape

although there may have been some scrub/woodland represented in late Roman context 3020/C/7.

Conclusion and recommendations

As stated above the principal aim of this assessment was to determine the condition/preservation, quantity and variety of any extant pollen in the material and this has been achieved. The data have demonstrated that pollen was present in all the samples examined although the concentrations in the two samples from the DUGM ditch fills (DUGM90 samples 52 and 73) were lower and the quality of the pollen preservation was poor. There is pollen preserved in the other remaining samples from DUGM90 (pit fill samples 56 and 61) and those from SLGM at concentrations that would allow full pollen analysis to be undertaken. Since all samples are phased to the late Roman period, the aim of further work would be, when considered alongside other palaeoenvironmental and palaeoeconomic evidence, to provide an indication of the local/regional landscape at this time and to evaluate the likely farming regime. Analysis will therefore concentrate on the lower fills of late Roman stone-lined waterlogged well/waterhole (4162), the late Roman waterlogged pit (10141) and sample 56 from DUGM90.

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Table D.5.1: Pollen assessment, SLGM

Site	Context	Sample no.	Depth (m)	Conc/ml (x1000)	Preservation	Major pollen types	Inferred vegetation	Potential
SLGM04	4159	4041	0.38-0.40	95.8942	Mixed	Poaceae, <i>Artemisia</i> , <i>Plantago lanceolata</i> , Aster-type, Asteraceae (Lactucoideae), <i>Rumex</i> sp, wide range of occasional other herbs including cereal-type and a few <i>Corylus</i> grains	Grassland/pasture, waste ground and some cereal cultivation	Yes
SLGM04	4159	4045	0.46-0.48	50.0316	Good -mixed	Poaceae, <i>Rumex</i> sp, <i>Sinapis</i> - type, wide range of occasional other herbs including cereal-type and a few <i>Corylus</i> and <i>Salix</i> grains	Grassland/pasture, waste ground and some cereal cultivation	Yes
SLGM04	4159	4047	0.50-0.52	98.3806	Good	<i>Rumex</i> sp undifferentiated, Poaceae, <i>Artemisia</i> , Aster-type, <i>Ranunculus</i> sp, wide range of occasional other herbs including cereal-type and a few <i>Corylus</i> and <i>Alnus</i> grains	Grassland/pasture, waste ground and some cereal cultivation	Yes
SLGM04	4159	4049	0.54-0.56	60.5446	Good	Poaceae, <i>Rumex</i> sp, <i>Sinapis</i> - type, wide range of occasional other herbs including cereal-type and a few <i>Corylus</i> grains	Grassland/pasture, waste ground and some cereal cultivation	Yes
SLGM06	10143	5153	0.61-0.62	21.237	Mixed	Poaceae, <i>Sinapis</i> - type, <i>Artemisia</i> , <i>Filipendula</i> , <i>Cirsium</i> sp, Asteraceae (Lactucoideae), wide range of occasional other herbs including cereal-type and a few <i>Corylus</i> grains	Grassland/pasture, waste ground and some cereal cultivation	Yes
SLGM06	10143	5153	0.66-0.67	11.2684	Mixed	Poaceae, Asteraceae (Lactucoideae), occasional other herbs and a few <i>Corylus</i> , <i>Quercus</i> and <i>Ilex</i> grains	Grassland/pasture, and waste ground	Yes
SLGM06	10143	5153	0.71-0.72	21.2726	Good -mixed	Poaceae, Asteraceae (Lactucoideae), Apiaceae undifferentiated, occasional other herbs including cereal grains and a few <i>Corylus</i> and <i>Quercus</i> grains	Grassland/pasture, waste ground and some cereal cultivation	Yes
SLGM06	10150	5153	0.76-0.77	90.8502	Good -mixed	Poaceae, Asteraceae (Lactucoideae), Apiaceae undifferentiated, Brassicaceae undifferentiated, occasional other herbs including <i>Triticum</i> sp and a few <i>Corylus</i> and other tree taxa grains	Grassland/pasture, waste ground and some cereal cultivation	Yes

Table D.5.2: Pollen assessment, DUGM

Site	Context	Sample no.	Feature type	Conc/ml (x1000)	Preservation	Major pollen types	Inferred vegetation	Potential
DUGM90	3020/C/7	52	2nd of two ditch fills	0.9278	Poor to sparse	Poaceae, <i>Alnus</i> , <i>Corylus</i> , occasional other grains of other herbs and trees, <i>Pteridium aquilinum</i> and fern spores	Open landscape with some scrub woodland	Possible
DUGM90	3049/A/6	56	SE quadrant	76.9412	Good	Poaceae, <i>Plantago lanceolata</i> , Aster-type, Apiaceae undifferentiated,	Grassland/pasture, waste	Yes



			of pit: 2nd of 7 fills			<i>Centaurea nigra</i> , <i>Ranunculus</i> sp, <i>Filipendula</i> , <i>Artemisia</i> , occasional other herbs including cereal-type and some <i>Fraxinus</i> pollen.	ground and some cereal cultivation. Ash pollen may suggest hedges	
DUGM90	3005/C/3	61	SW quadrant of pit: 3rd of 4 fills	164.800	Mixed-good	Poaceae, Asteraceae (Lactucoideae), <i>Plantago lanceolata</i> , <i>Centaurea nigra</i> , <i>Ranunculus</i> sp, <i>Filipendula</i> , <i>Artemisia</i> , occasional other herbs including cereal-type and a few <i>Corylus</i> -type grains	Grassland/pasture, waste ground and some cereal cultivation	Yes
DUGM90	3507	73	Ditch fill	19.8719	Poor	Poaceae, Asteraceae (Lactucoideae), <i>Plantago lanceolata</i> , Cyperaceae, occasional other herbs including cereal-type, <i>Pteridium aquilinum</i> and undifferentiated ferns	Grassland/pasture, waste ground and some cereal cultivation	Possible

D.6 Land and freshwater snails

Elizabeth Stafford

Introduction

Nineteen snail samples from 16 middle Roman ditch profiles from SLGM Area 5 were submitted for assessment (from the 2008 excavations). In addition a further 15 samples were assessed from bulk samples from a series of grave fills, ditches and pits in SLGM Areas 3 and 4 where the charred plant remains (CPR) assessment had indicated the presence of numerous snail shells. The purpose of the assessment was to ascertain if the shell assemblages can provide data on the local site environment for the phases of activity represented. At the most basic level the assessment aimed to:

- Determine the presence/absence of molluscan remains
- Give preliminary data on taxonomic content
- Indicate the potential for further work

Method

The volume of sediment processed for the dedicated snails samples varied between 1 litre and 2 litres (Table D.6.1). The samples were floated onto 0.5 mm mesh and the fine residues were also retained to 0.5 mm. Both flots and residues were air-dried. The volumes processed for the bulk CPR samples varied from 3 to 40 litres (Table D.6.2). These samples had been floated onto 0.25 m mesh. The flots from both the dedicated snail samples and bulk samples were rapidly scanned under a binocular microscope and an indication of the abundance of identifiable shell along with key taxa were noted. Habitat information follows Evans 1972 and Kerney 1999. Nomenclature follows Kerney 1999.

It was clear on first examination that the shell from the bulk samples would not be examined again beyond the assessment stage due to low shell numbers. The opportunity was taken to rapidly record the assemblages to species level with the view to incorporating the data into the final analysis report. The assemblages from the dedicated snail samples were recorded in less detail as the freshwater species were diverse and many require careful identification with the aid of a reference collection; a task more appropriate to the analysis stage.

Results

Snail samples

Identifiable shell was variably preserved between the samples ranging from absent to very abundant in four samples. Many of the flots, however, contained noticeably larger quantities of very fragmented shell which suggests a level of mechanical damage perhaps indicating that at least some of the shell represents flood debris. This is consistent with the character of the assemblages which are almost wholly dominated by a range of freshwater species, and is also consistent with the lithological descriptions of sandy and silty clays. The freshwater assemblage was quite diverse and included numerous slum, catholic and particularly ditch species (e.g. *Planorbis planorbis*, *Valvata cristata*). Flowing water species are indicated by the occasional presence of *Bithynia* which may have been transported by overbank flooding. It is clear that a number of the samples indicate very wet conditions as the features infilled. Terrestrial species were much fewer and largely comprised snails that tend to frequent damp environments such

as floodplain pasture or meadow (eg *Vallonia pulchella*, *Vertigo antivertigo* and *Carychium minimum*).

Bulk samples

Shell was generally much more poorly preserved in the bulk samples taking into account the far larger volumes of sediment processed. Overall the assemblages were of a very different character. Dry land terrestrial species dominated, but these comprised only a few species. The most abundant was the catholic species *Trichia hispida* with lesser numbers of open country grassland snails *Vallonia excentrica* and *Vallonia costata*. Other open country species included *Pupilla muscorum* and *Vertigo pygmaea*. Occasional freshwater slum species were noted (eg *Lymnaea truncatula*, *Anisus leucostoma*) and species that frequent damp ground (eg *Succinea/Oxyloma*, *Vallonia pulchella*). Although there are taphonomic problems associated with features intentionally backfilled such as graves or pits, broadly the assemblages suggest that the fills of the features derive from soils formed in a very open environment; probably grassland. The slum species *Anisus leucostoma* tended to be more frequent in the grave samples, perhaps suggesting that these soil fills derived from a damper grassland environment. The shade-demanding species *Discus rotundatus* was noted in three samples but was more abundant in ditch 8498. This may suggest areas of scrub or a hedge in the vicinity, although there was really no other associated species to corroborate this.

Recommendations

Overall snails are preserved in fair to good numbers in seven of the dedicated snail samples assessed from Area 5. These assemblages, given their diversity, have the potential to provide additional data on the hydrological conditions pertaining at the site during the period represented by these features. In order to provide a definitive species list and to support the environmental interpretations from other categories of material it is recommended that the seven most abundant samples are analysed further. Analysis will involve identification of whole shells and apical fragments from both flots and residues. The shells will be examined under a binocular microscope at magnifications of up to x40. Shells will be identified to species level with the aid of a modern reference collections held at Oxford Archaeology. The results of the analysis will be presented in a written report supported by tabulated data.

The resources required for analysis include 3.5 days at environmental supervisor rate and 5 days at specialist rate.

Table D.6.1: Snail assessment results SLGM08, Area 5

SS	Ctx	Feature Type	Vol (L)	Description	Abun	Comments
12501	12763	Ditch	2	Moist sandy silt clay (20/30/50%). Dark yellowish brown. Well compacted, soft, no structure	+++	Much broken shell, abundant identifiable shell. May have been waterlogged. Mainly planorbids with Valvata, Gyraulus, Punctum, Bathyomphalus, Lymnaea, Anisus, Bithynia
12504	12592	Ditch	2	Moist light olive brown soft sticky clay. INCL: granule to pebble sized angular to subangular stones, 20%.	-	No identifiable shell
12505	12583	Ditch	2	Pale olive sandy silt clay	+	Much broken shell. Occasional identifiable shells. Vallonia, Lymnaea.
12508	12634	Ditch	2	Moist light olive brown silty clay (20/80%). Smooth, sticky, moderate hard. No structure. INCL: Coarse sand, <10%, subangular to rounded stone pebbles to medium sized cobbles, 20%. Poorly sorted.	+	Mainly broken shell. Occasional Lymnaea.
12512	12712	Ditch	2	Olive yellow silty clay	-	No identifiable shell
12515	12719	Ditch	1.7	Olive sandy clay.	+	Occasional shell. Planorbis, Vertigo sp.
12518	12827	Ditch	1.3	Olive silty clay.	+	Fair amount of broken shell. Few identifiable shells. Pisidium sp.
12521	12751	Ditch	1.6	Light olive brown sandy clay.	+++	Much broken shell, identifiable shell moderate to abundant. Mainly Anisus and Lymnaea and Planorbis. Also Carychium minimum, Vertigo antvertigo.
12524	12803	Ditch	2	Dark greyish brown gravelly sandy clay.		A few shells identified but not abundant. Planorbis, Valvata cristata, Lymnaea truncatula, Carychium minimum, Anisus.
12526	12748	Ditch	2	Olive brown silty clay	-	No identifiable shell
12529	12736	Ditch	2	Light brown sandy silt clay	-	No identifiable shell
12531	12739	Ditch	2	Olive silty clay.	++	Moderate amount of identifiable shell, but also broken shell. Anisus, Planorbis, Lymnaea, Gyraulus crista, Bathyomphalus.
12533	12692	Ditch	2	Olive brown silty clay	+++	Abundant broken shell, abundant identifiable shells. Planorbis most abundant with Valvata cristata, Vallonia, Lymnaea, Succinea/Oxyloma, Anisus, Gyraulus crista, Bithynia
12536	12632	Ditch	1	Olive sandy clay.	+	Possibly once slightly waterlogged. Small flat with only one Vallonia shell noted.
12539	12668	Ditch	1.4	Olive grey silty clay.	+	Occasional shell. Carychium minimum, cf. Trichia.
12541	12629	Ditch	2	Might light olive brown soft and sticky silty clay. INCL: sand 5-10%, granule to medium pebble stones, 10%.	++	Fair amount of broken shell, small to moderate amount of identifiable shells. A few V. pygmaea and Succinea/Oxyloma sp. Also Vallonia, Lymnaea, Carychium minimum.

SS	Ctx	Feature Type	Vol (L)	Description	Abun	Comments
12544	12708	Ditch	1.8	Light olive brown silty clay.	++	Lots of roots. Small amount of identifiable shell. <i>V. pygmaea</i> , <i>Succinea/Oxyloma</i> sp. <i>Cochlicopa</i> , <i>Punctum</i> , <i>Anisus</i> .
12547	12832	Ditch	2	Olive slightly sandy clay.	+++	Identifiable shell abundant in countable numbers. Much fragmented shell. <i>Anisus</i> , <i>Lymnaea</i> with <i>Vallonia</i> sp. <i>Carychium</i> minimum, <i>Succinea/Oxyloma</i> , <i>Planorbis</i> , <i>Valvata cristata</i> and <i>Pisidium</i> sp.
12550	12646	Ditch	2	Light olive brown silty clay	-	A few shell fragments, non identifiable

+ = present ++ moderately abundant, +++ very abundant



Table D.6.2: Snail assessment results from bulk samples, SLGM Areas 3 and 4

Feature no.	5028	8018	8382	8498	9838	9838	9838	9838	9838	9724	9724	10425	10424	10424	10484
Feature type	ditch	pit	crem	ditch	grave	grave	grave	grave	grave	grave	grave	grave	grave	grave	pit
Phase	LR	LR	LR	LR	RB	RB	RB	RB	RB	RB	RB	RB	RB	RB	RB
Sample	5000	5067	5108	5090	5138	5137	5139	5142	5143	5131	5129	5156	5155	5157	5168
Context	5027	8019	8561	8502	9841	9841	9841	9841	9841	9725	9725	10425	10425	10425	10485
Vol. processed (L)	40	20	36	8	4	8	4	3	3	8	8	10	5	8	37
Taxa															
Freshwater (slum)															
<i>Anisus leucostoma</i> (Millet)					12	7	2	4	2	2	1				
<i>Lymnaea truncatula</i> (Müller)	3														
Marsh															
<i>Vallonia pulchella</i> (Müller)								1							
<i>Succinea/Oxyloma</i> sp.	10	1		3							1			2	
<i>Carychium</i> sp.															
Open country															
<i>Vertigo</i> sp.										1					
<i>Vertigo pygmaea</i> (Draparnaud)				1	3	3	1	1			1				
<i>Vallonia excentrica</i> (Sterki)	7			2	3	6	2		1					1	1
<i>Vallonia costata</i> (Müller)	3				3	5		2	1	1					1
<i>Vallonia</i> sp.	5		3	6	5	5	2	9	1	3		6	3	1	
<i>Helicella. Itala</i> (Linnaeus)	2					1		1	1		1				
<i>Pupilla muscorum</i> (Linnaeus)						2	1	1	1						
Catholic															
<i>Trichia hispida</i> (Linnaeus)	83	44	15	27	15	13	8	6	5	6	6	25	9	5	13
<i>Arianta/Cepea</i> sp.							1						1	1	1
<i>Cepea</i> sp.	3														



Feature no.	5028	8018	8382	8498	9838	9838	9838	9838	9838	9724	9724	10425	10424	10424	10484
Feature type	ditch	pit	crem	ditch	grave	grave	grave	grave	grave	grave	grave	grave	grave	grave	pit
Phase	LR	LR	LR	LR	RB	RB	RB	RB	RB	RB	RB	RB	RB	RB	RB
Sample	5000	5067	5108	5090	5138	5137	5139	5142	5143	5131	5129	5156	5155	5157	5168
Context	5027	8019	8561	8502	9841	9841	9841	9841	9841	9725	9725	10425	10425	10425	10485
<i>Cochlicopa</i> sp.	5	1			3	4	3	1	1						
<i>Punctum pygmaea</i> (Draparnaud)								1							
Shade-demanding															
cf. <i>Aegopinella nitidula</i> (Draparnaud)										1					
<i>Vitrea</i> sp.							1								
<i>Discus rotundatus</i> (Müller)		3	2	12											
Total	121	49	20	51	44	47	21	27	13	14	10	31	13	10	16



APPENDIX E.

APPENDIX F. REFERENCES AND BIBLIOGRAPHY

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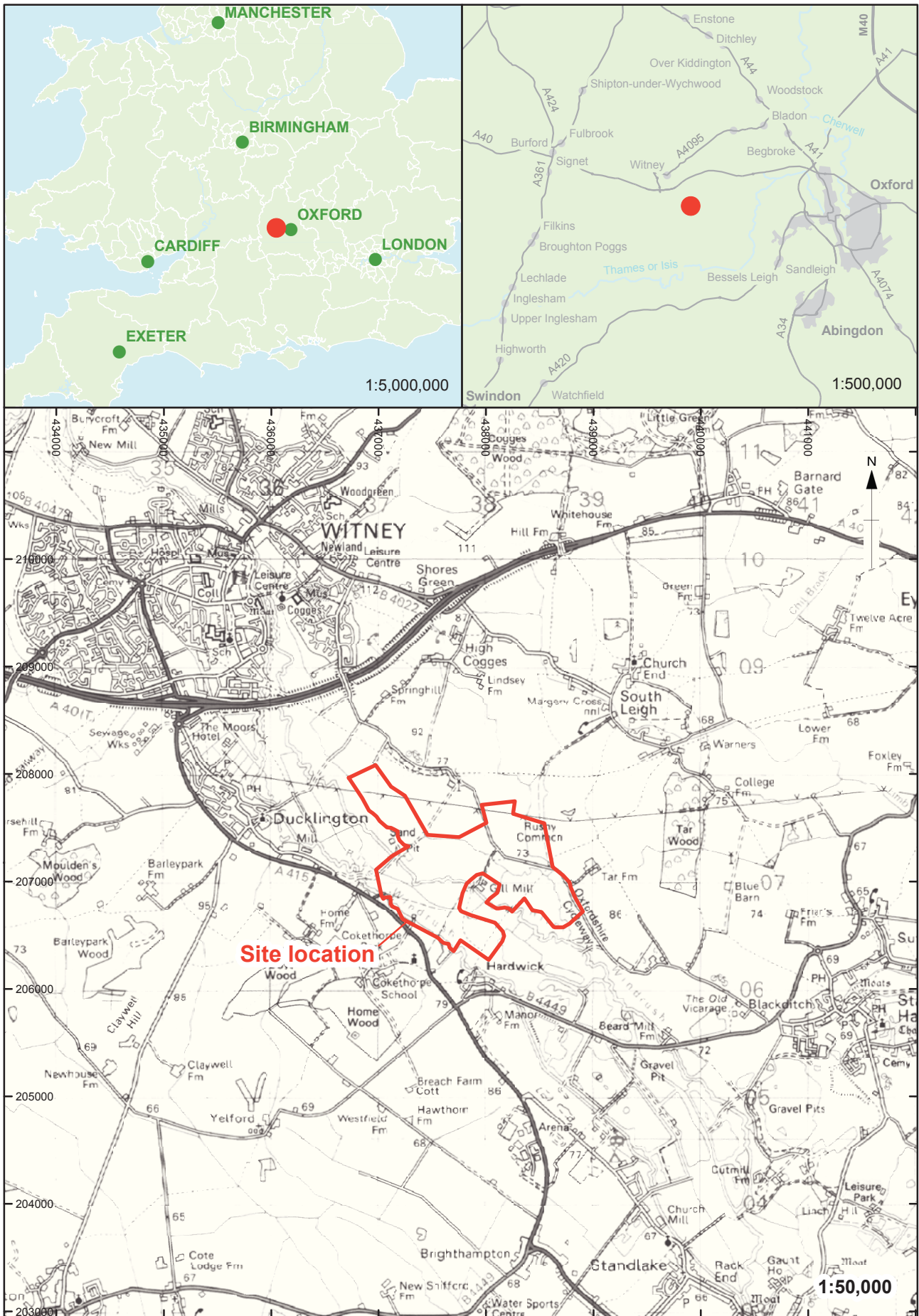
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Figure 1: Site location

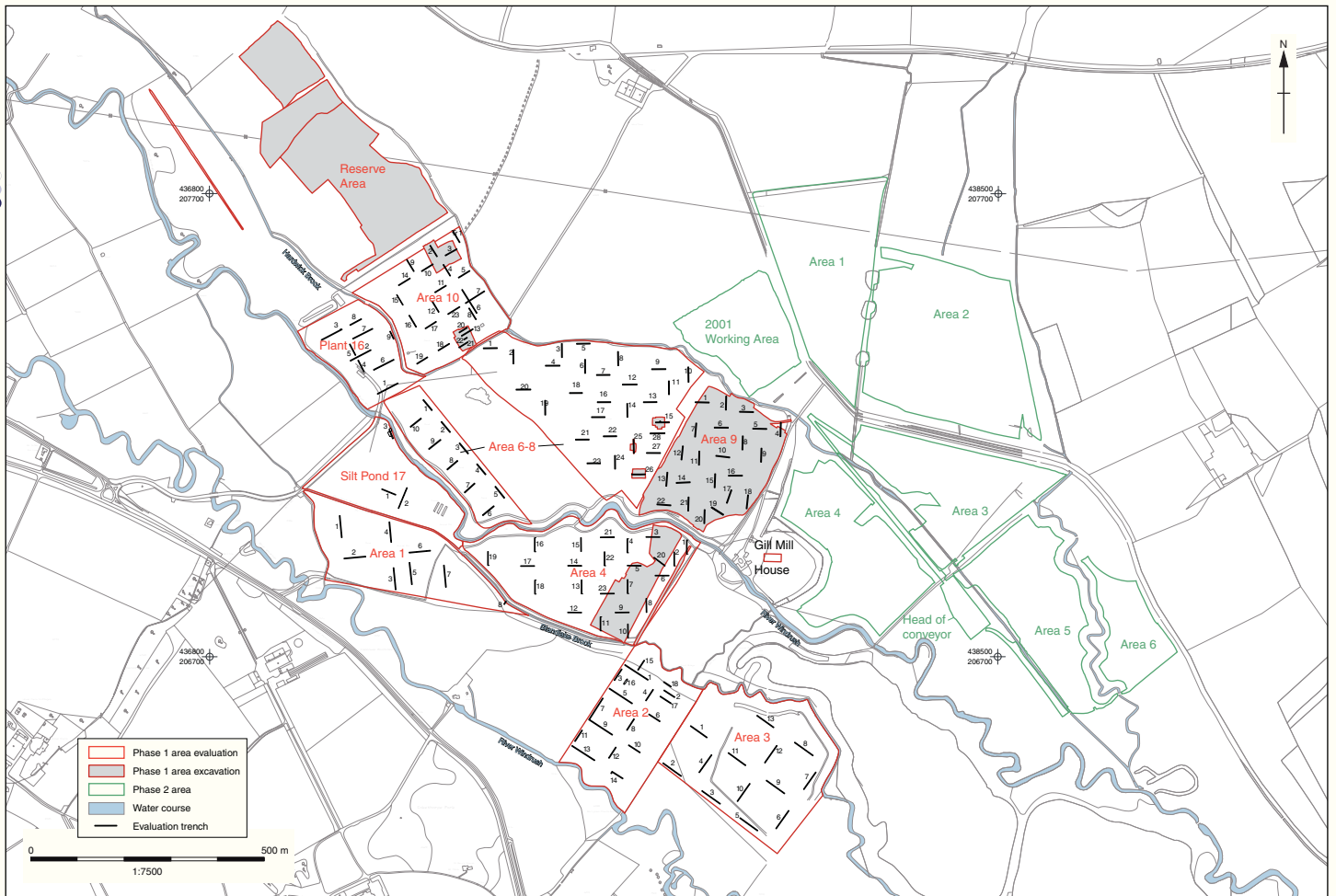


Figure 2: Plan of the phases of the investigation

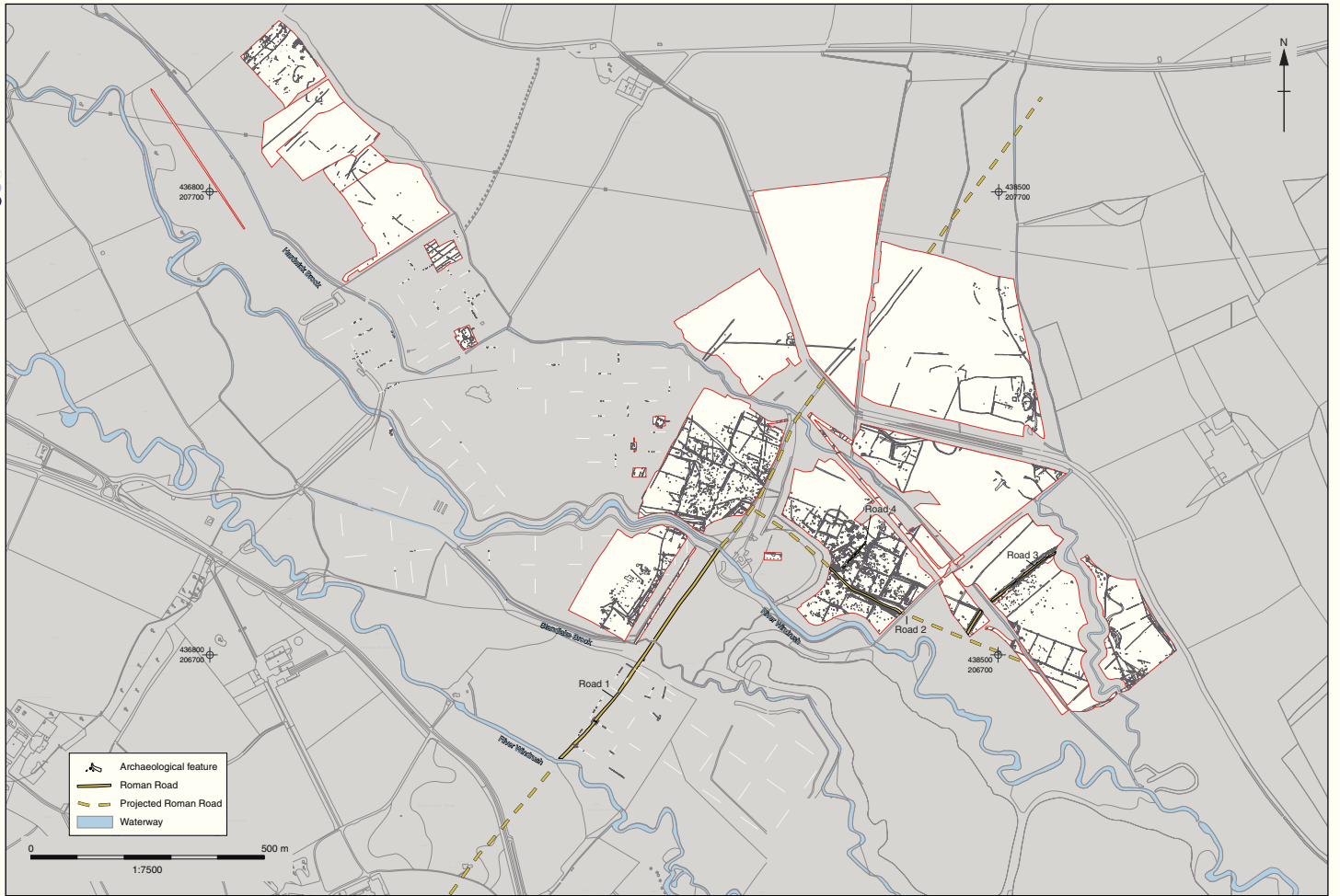


Figure 3: Overall plan showing all excavated features



Figure 4: Detail of the central part of the settlement

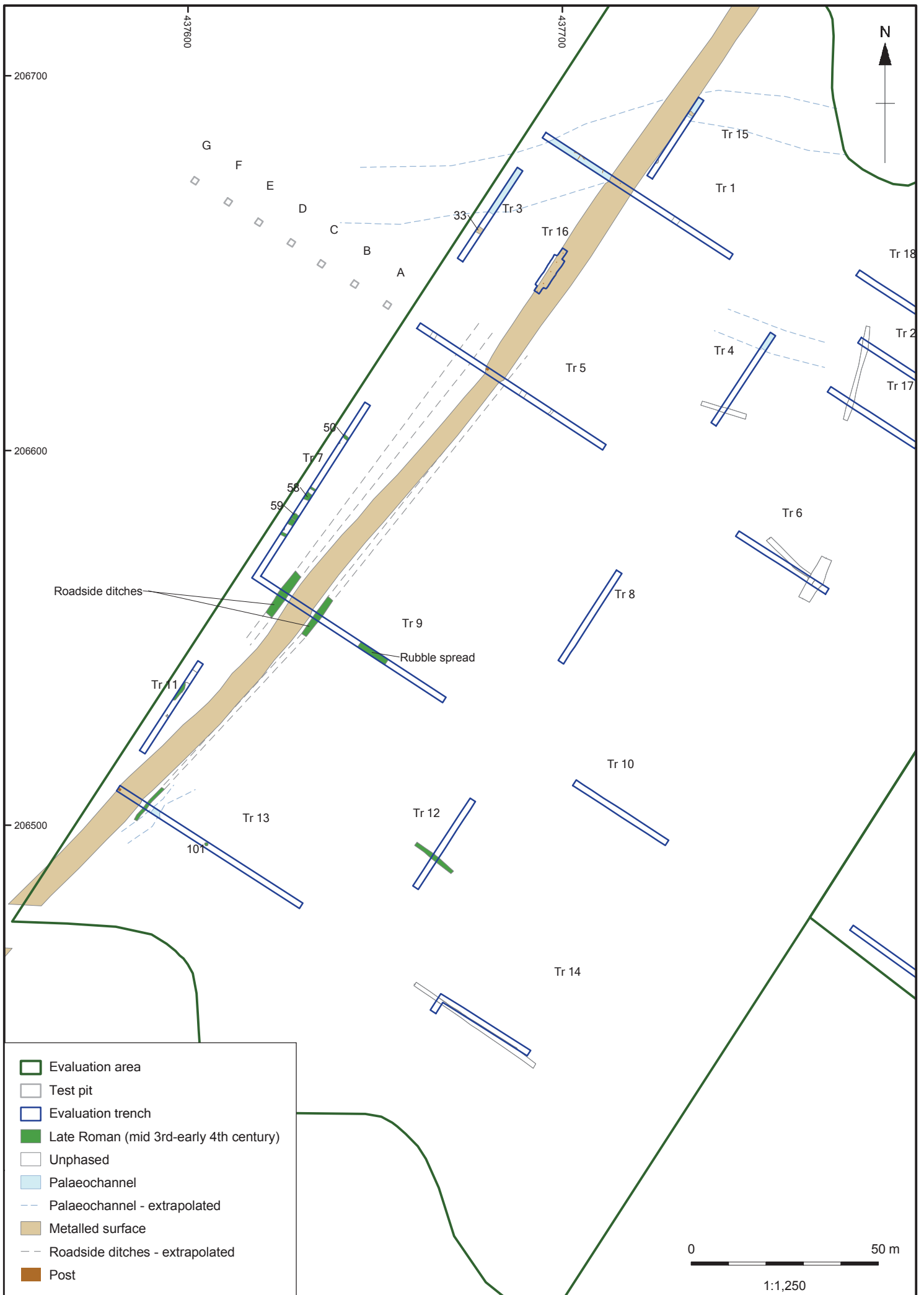


Figure 5: Plan of Phase 1, Area 2

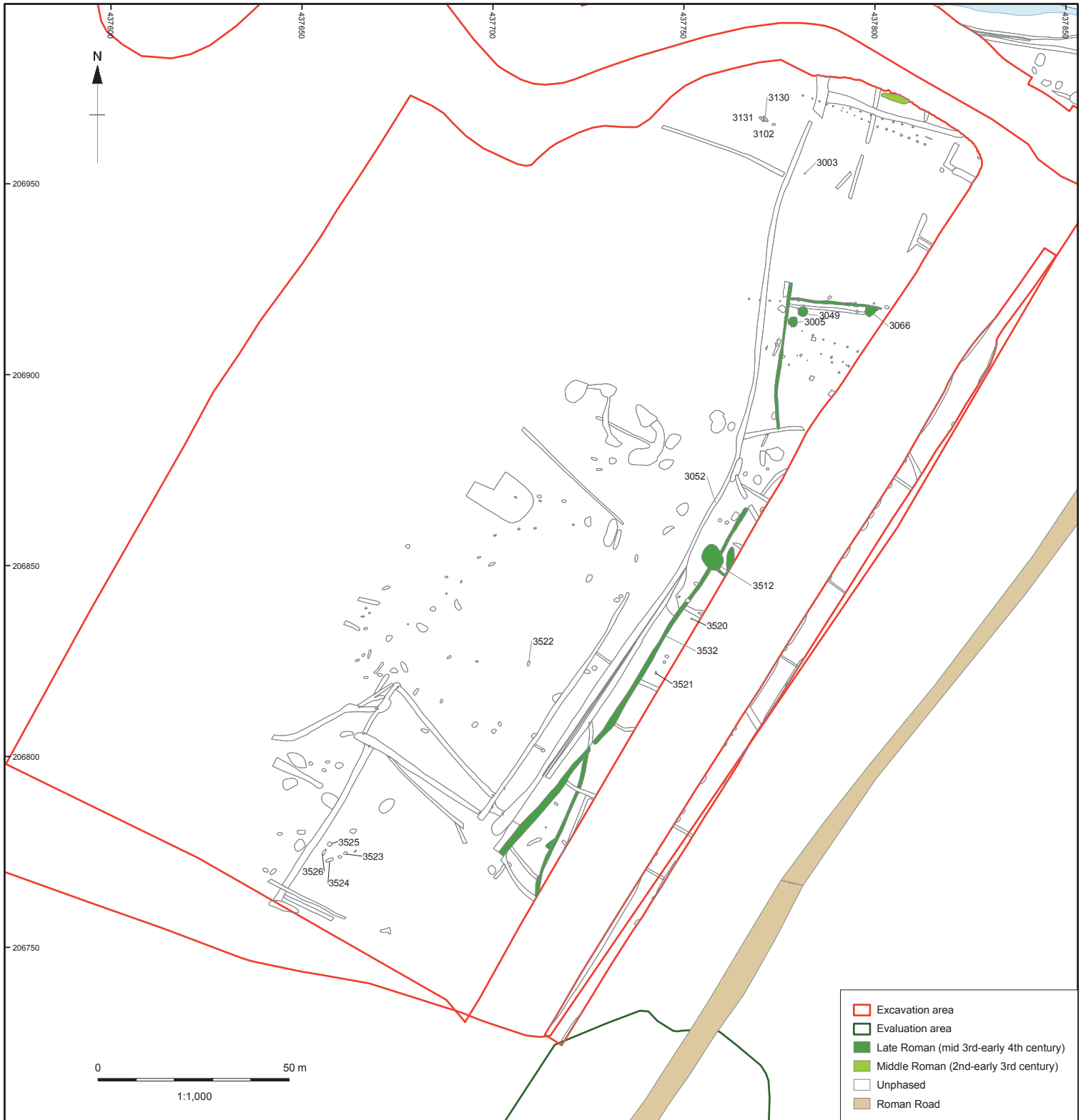


Figure 6: Plan of Phase 1, Area 4

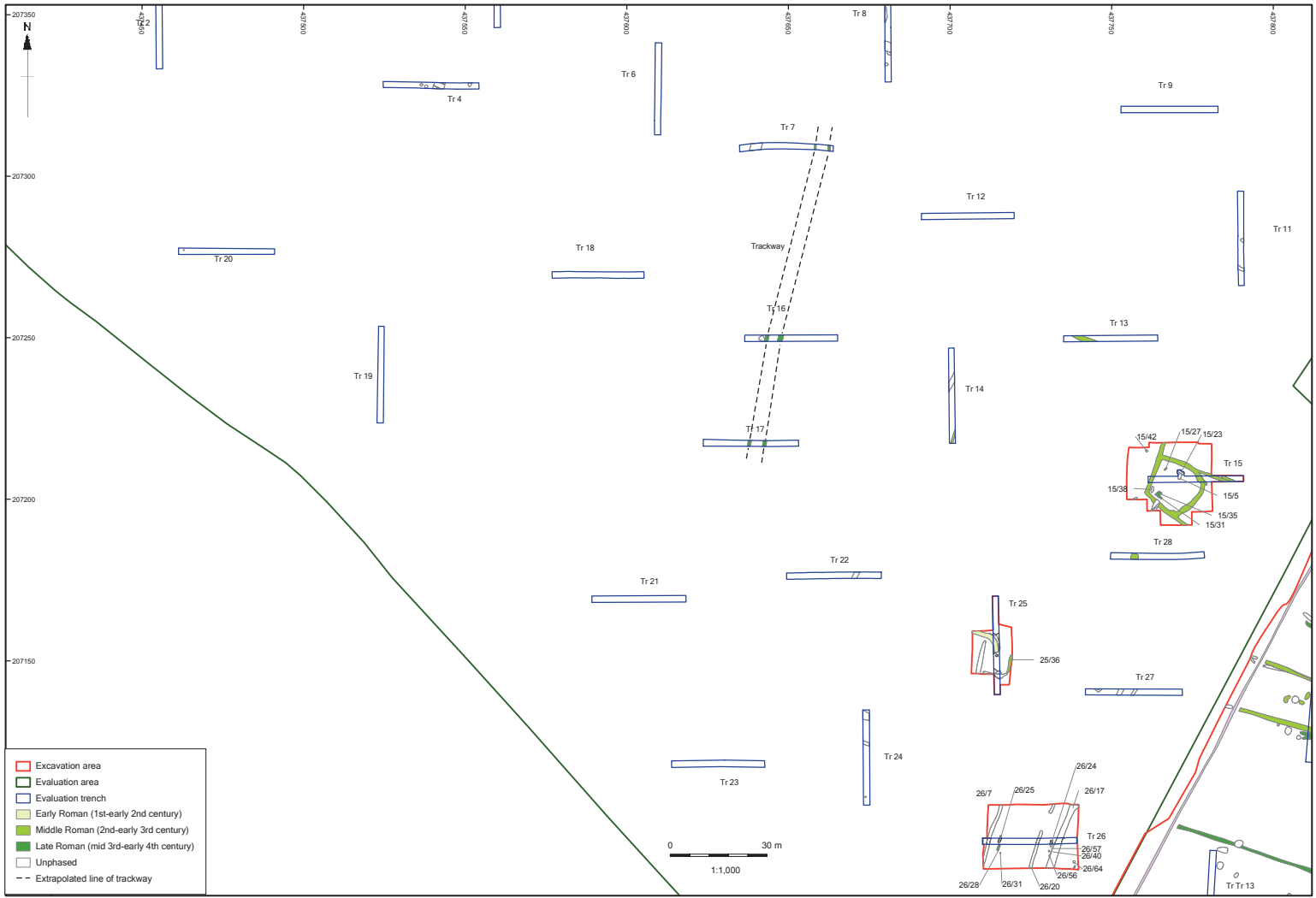


Figure 7: Plan of Phase 1, Areas 6, 7 and 8

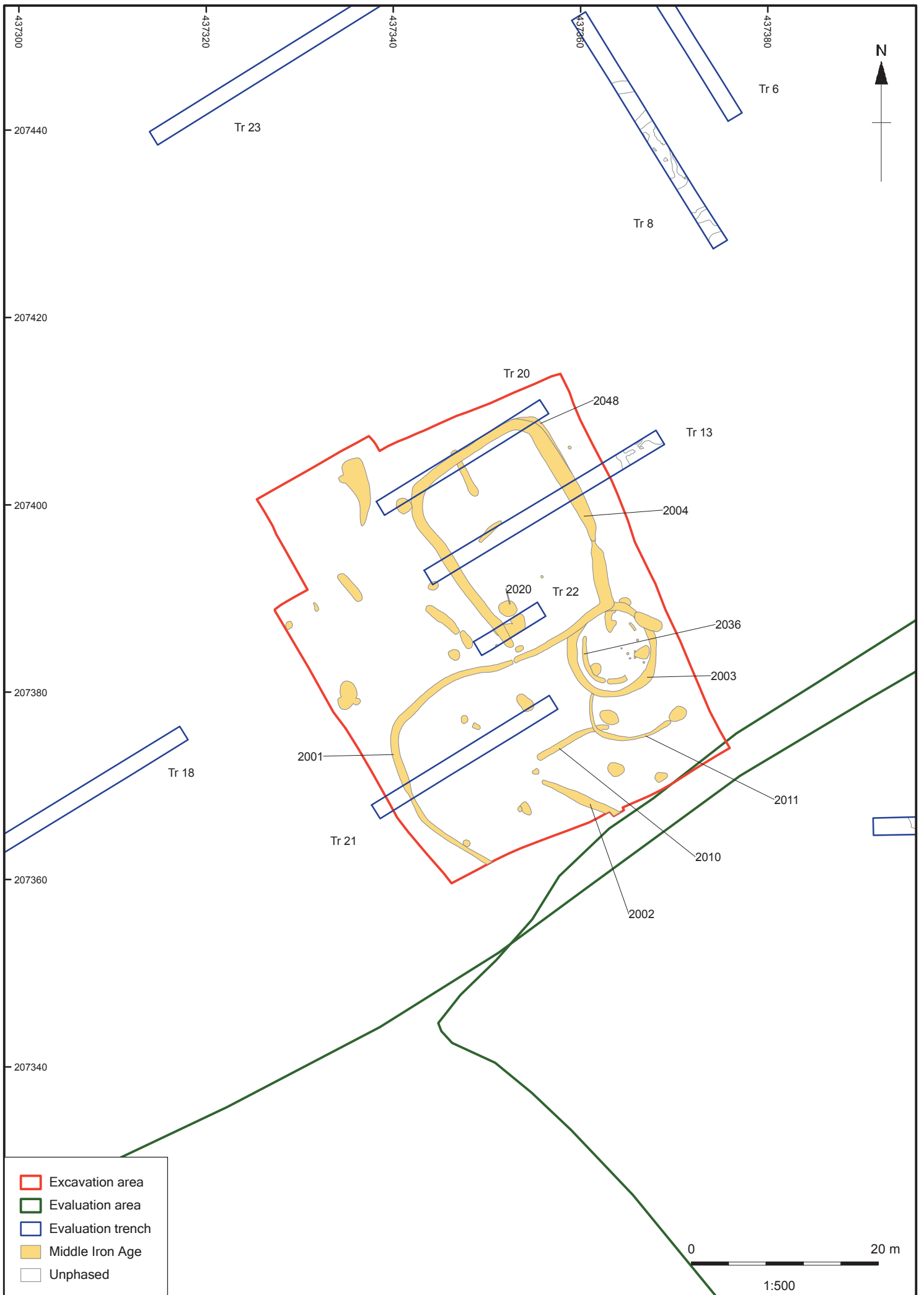


Figure 9: Plan of Phase 1, Area 10

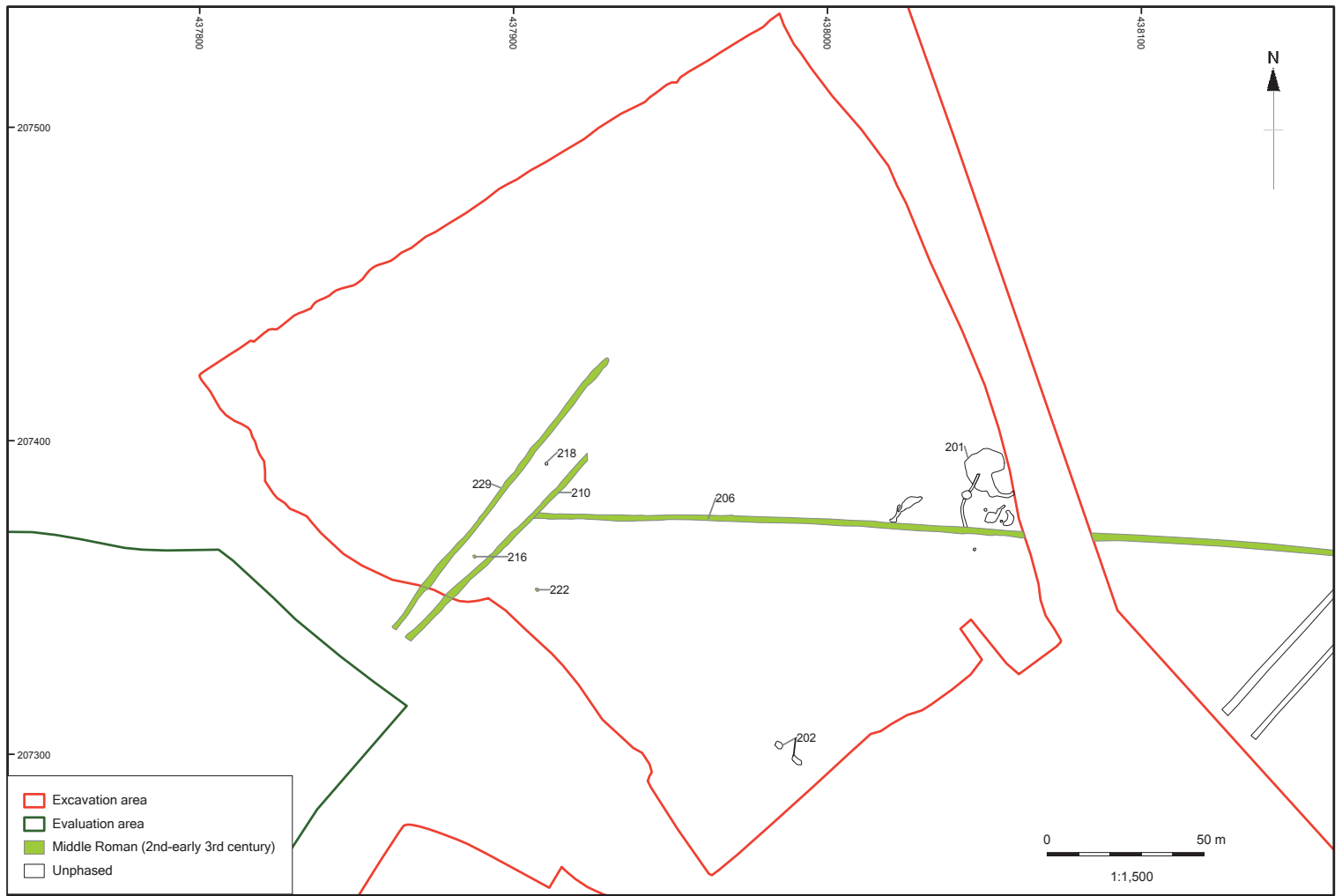


Figure 10: Plan of Phase 2 Working Area

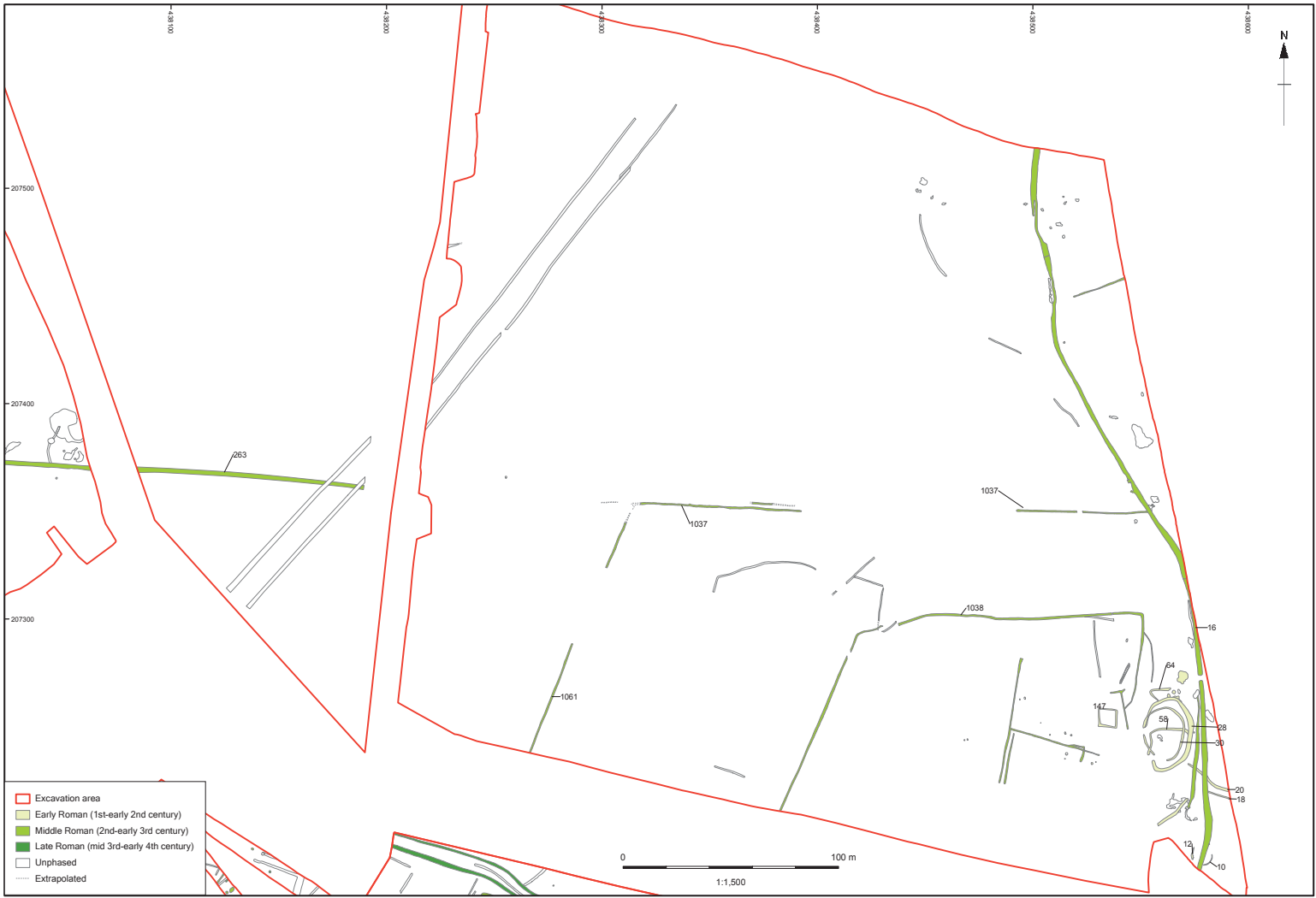


Figure 11: Plan of Phase 2, Areas 1 and 2



Figure 12: Plan of the eastern part of Phase 2, Area 3



Figure 14: Plan of Phase 2, Area 4

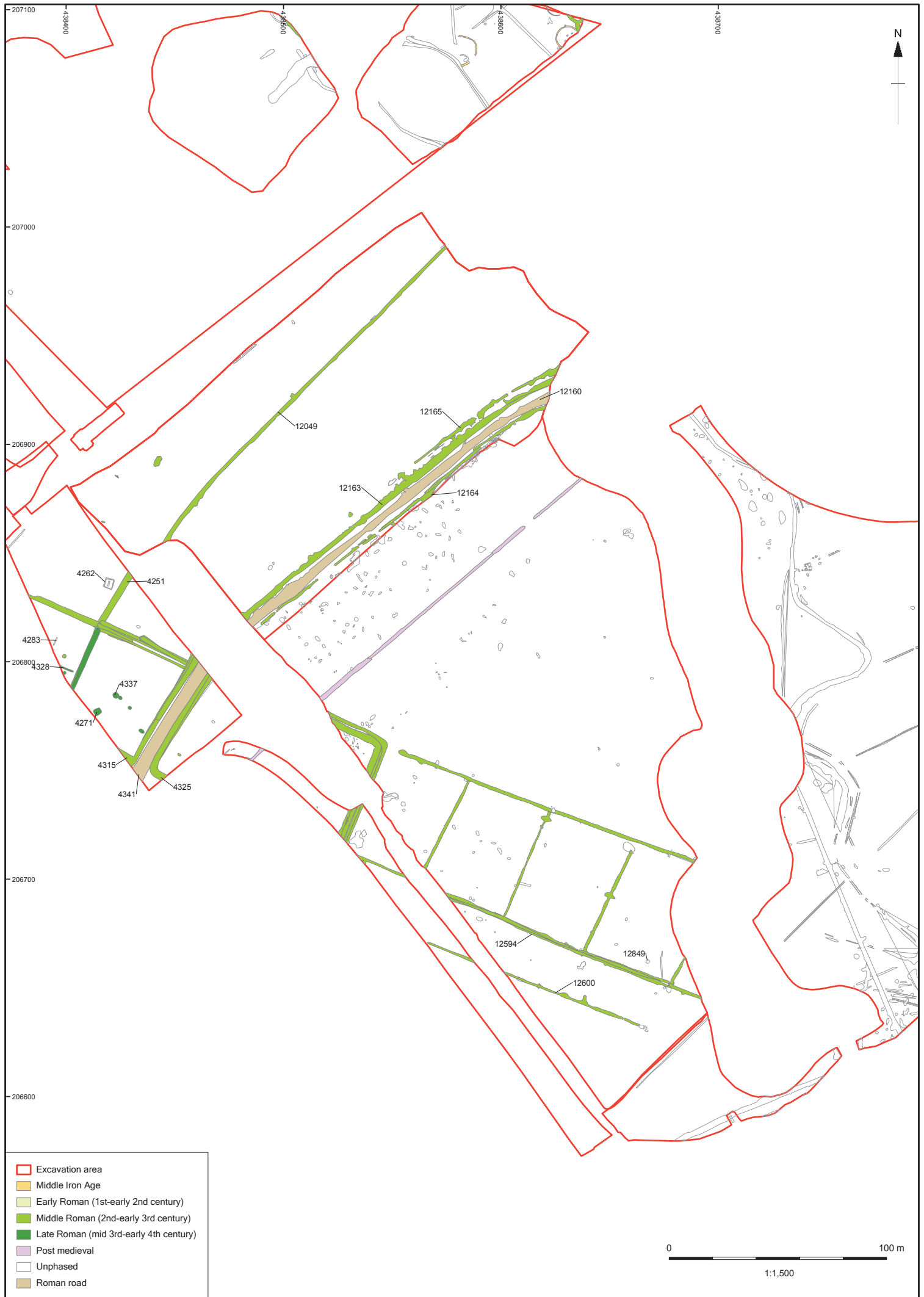


Figure 15: Plan of Phase 2, Area 5 and Head of the Conveyor



Figure 16: Burials at Gill Mill



Plate 5: Front and side views of the head from an Oxford colour-coated ware flagon (SF 5908)



Plate 6: Phase 2 Area 4; late Roman stone-founded building 7038



Plate 7: Phase 2 Area 4, a deep pit - possibly a waterhole



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