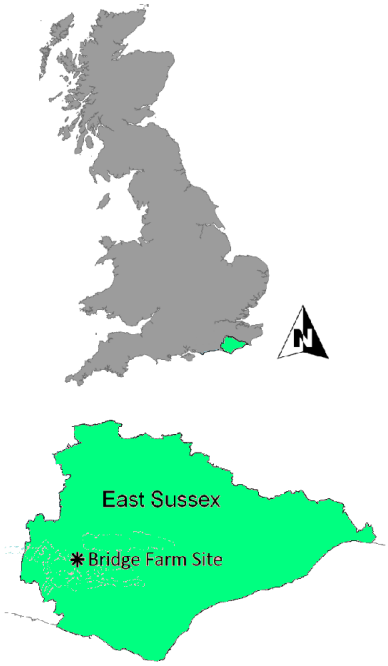
CAP CULVER ARCHAEOLOGICAL PROJECT

Investigations of the Roman riverside settlement in Five Acres at Bridge Farm, Wellingham, East Sussex 2014 (CAP.BF14)

PART 4: THE SPECIALIST REPORTS
including artefact catalogues



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PART 4: The Specialist's Reports & Catalogues

Report Data

National Grid Reference (NGR): 542970 114565 (TQ42971456)

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Front cover shows an imaginative reconstruction of the 13 large postholes excavated in 2014 as an aisled warehouse (David Millum 2017)

PART 4: Section 16 The Specialist Reports & Section 17 Published Summary Documents

16 List of the Specialist Reports included in this section

16.1.1 An assessment of the pottery by Malcolm Lyne

1. Introduction

The excavation yielded 7184 sherds (70184 g.) of pottery from 130 contexts dating between c.AD.70/100 and ?the 5th century, with most belonging to the late Roman period. A few fresh handmade sherds from a very crude vessel with coarse crushed flint filler were present in the pottery assemblages from the late 4th century Ditches 003 and 006: the pot may be Sub-Roman in date. A further 2204 sherds (4572) of pottery were retrieved from environmental samples. Most of this material is very ground-up and abraded.

2. Methodology

All of the pottery assemblages were quantified by numbers of sherds and their weights per fabric. These fabrics were identified using a x8 magnification lens with built in metric graticule in order to determine the natures, forms, sizes and frequencies of added filler inclusions and those naturally present in the potting clay. The fabric codes (Appendix 1) are those created by the author for sites in East Sussex and previously used on sites at Beddingham, Bardown, Barcombe, Ashburnham, Falmer etc. with additions and omissions.

3. The Assemblages

None of the pottery from this trench appears to be prehistoric and an absence of Gallo-Belgic imports suggests that pre-Flavian occupation is also absent.

3.1. c.AD.70-270

The most significant pottery assemblages of this date come from the various cuts across Ditch 001. This feature bifurcates at its northern end, indicating a recut during its life. The fills of cuts 5007 and 5048 across the eastern ditch (Contexts 5006 and 5047) yielded 185 sherds (1617 g.) of pottery. This assemblage includes nothing which needs to be later than c.AD.120/150. The fills of cuts 5033 and 5087 across the western ditch (Contexts 5036 and 5086) produced 197 sherds (2964 g) of pottery of very similar date range, including the greater part of a greyware rusticated jar. On balance, it seems likely that the eastern ditch is the earlier of the two.

The fills of the single ditch to the south (Contexts 5101, 5114, 5204 and 5210) yielded a further 284 sherds (5014 g.) of pottery, including more of the rusticated jar encountered in the western ditch further north. The pottery assemblages from these cuts are largely c.AD.70-150 in date but also include a little c.AD.150-250 dated material.

The two fills of furnace 002 fired from the side of Ditch 001 yielded 68 sherds (606 g.) of pottery with a similar c.AD.70-250 date range.

The largest assemblage from the site is a 710 sherd (5733 g.) one from a large ill-defined and not fully excavated pit below and cut by Ditch 003. The assemblage includes material from both features, with that from the pit being of 3rd c. date and including products of the Wickham Barn kilns as well as fragments from two BB2 bowls of Monaghan's class 5C (1987, c.150/70-250).

3.2. c.AD.270-400+

The pottery dates for post hole structure 004 are ambiguous. The fill of the constructional Post pit for Posthole 9 (Context 5132) yielded 10 sherds of pottery, the latest fragment of which came from a coarse-sanded Wickham Barn kilns jar (c.270-350). A somewhat larger 3rd c. 72 sherd assemblage was retrieved from the post pit for Posthole 13, the latest fragment of which dated to after AD.270. There were no other constructional post pit assemblages but it seems likely that Structure 004 was erected during the last years of the 3rd century. The various post-pipes yielded very little pottery and what there was tended to be 3rd and 4th c. in date and not deliberately deposited. The pottery from the post-pipes for Post-holes

8 and 10 includes post AD.370 sherds, indicating that the building probably survived until the last years of the 4th century.

The fills of Pits 009 and 010 yielded 568 sherds (5988 g.) and 218 sherds (1771 g.) of pottery respectively. The individual fills in both pits all included late 4th c. sherds, with the possible exception of the lowest fill in Pit 009, indicating that both features had been backfilled in the last years of Roman occupation. The waterlogged lowest fill of Pit 009 contained a 46 sherd pottery assemblage dating to c.AD.300-370+.

Cuts 5010, 5031, 5104, 5106, 5207 and 5209 across Gullies 003 and 008, and clearance 5109 over the former, yielded 633 sherds (7560 g.) of pottery between them. The material suggests a late date of c.350/70-400+ for the features, with fresh sherds from one or more handmade pots with coarse crushed-flint and ironstone filler suggesting that pot continued being dumped in the them well into the 5th century. These sherds look as if they should be Middle or Late Bronze Age in date but the fact that the flint filler is not calcined and the sherds are some of the freshest from the ditch supports the later date. A few sherds from vesicular East Sussex Ware vessels also have chaff impressions, suggesting that they could be transitional between Roman East Sussex and post-Roman chaff-tempered wares.

The rest of the pottery includes significant quantities of sherds in East Sussex Ware fabric C1P with prefired hard siltstone grog, Alice Holt/Farnham greyware, Overwey/ Portchester D, Oxfordshire Red Colour-coat and Pevensey ware.

Structure 007 in the north-west corner of the trench comprises a hearth with two fills (Contexts 5004 and 5053) containing 159 sherds (1719 g.) of pottery, most of which is residual but includes one sherd each from a Thundersbarrow storage-jar (c.350-400+) and an Overwey horizontally-rilled jar. The latter could be as early as AD.325 in date but is more likely to date between c.AD.370 and 420 this far from source. Postholes 5079, 5060, 5081 and 5082 are thought to be part of the same structure.

Bibliography

Monaghan, J. 1987 *Upchurch and Thameside Roman Pottery*, BAR Brit Ser 173

Fabrics

Coarse Roman

C1A. Soapy-textured East Sussex Ware with very-fine camouflaged grog inclusions.
C1D. East Sussex Ware variant with coarse multi-coloured grog inclusions.
C1E. East Sussex Ware with off-white siltstone grog filler
C1F. East Sussex Ware with profuse off-white and orange grog.
C1G. East Sussex Ware with orange grog.
C1H. Similar to C1D but with additional very-fine sand.
C1L. East Sussex Ware with numerous vesicles where chalk inclusions have leached out.
C1P. Late East Sussex Ware with hard prefired angular siltstone grog.
C1Q. Thundersbarrow storage-jar fabric.
C2. Grog and ironstone-grit tempered ware
C3. BB1
C4 East Sussex Brown-Burnished ware
C5A. Coarse Arun Valley greyware
C5B. Fine Arun Valley greyware
C6. Rowlands Castle ware
C7. Thameside greyware
C8A.Coarse off-white fabric fired grey to black, with <2.00 mm. black and brown ferrous inclusions and <1.00 mm. quartz-sand filler. A Wickham Barn kilns fabric
C8B. Finer version with <0.50 mm. sand filler. A Wickham Barn kilns fabric.

C8C. Very-fine version with <0.30 mm. sand filler. A Wickham Barn kilns fabric.
C8D. Sand-free version.
C8E. Sand-free whiteware without surface greying.
C9A-D. Orange-cored version with similar degrees of coarseness.
C10A. Very-fine Alice Holt/Farnham greyware.
C10B. Coarse-sanded version.
C11. Overwey/Portchester D fabric.
C16. Miscellaneous oxidised sand-tenpered ware.
C19. Miscellaneous greywares
C20. North Kent BB2
C21. Coarse, oxidised briquetage fabric with profuse coarse quartz, ironstone and alluvial-flint grit inclusions.
C28. 'Scorched' Thameside greyware
C29. Hard wheel-turned blue-grey fabric with profuse <0.20 mm. quartz-sand filler.

Fine Roman

F1A. South Gaulish Samian
F1D. Central Gaulish Samian
F1E. East Gaulish Samian
F7. Hardham 'London ware'
F9A. North Kent Fineware
F12. Central Gaulish Black Colour-coat fabric
F13. Cologne colour-coat
F14. Moselkeramik
F14A. Late Moselkeramik with white-painted decoration
F15B. Lower Nene Valley Colour-coat. White fabric
F17A. Oxfordshire Red Colour-coat fabric
F17C. Oxfordshire White-slipped ware
F17D. Oxfordshire Parchment ware
F18A. New Forest Purple Colour-coat fabric (Fulford 1975, Fabric 1A
F18B. New Forest cream ware with brown-to-red colour-coat
F18D. Wickham Barn kilns imitation New Forest Purple Colour-coat fabric
F20. Pevensey ware
F24. Miscellaneous finewares
F25. Silty polished greyware
F34. Streak-burnished ware

Mortaria

M9. Hard, rough white Rhenish mortaria fabric
MX. Miscellaneous mortaria.

Amphorae

A1. Early Baetican Dressel 20 fabric
A2. Late Dressel 20 fabric
A3. Gauloise 4 fabric

Sub-Roman(?)

SR1. Lumpy handmade black with protruding 1.00<3.00 mm. crushed non-calcined flint and black ironstone.

16.1.2 Catalogue of the pottery by context by Malcolm Lyne

Context	Fabric	Form	Date-range	No of sherds	Weight in gm	Comments
u/s				67	557g	
5000			c.100-400+	1434	12958g	Subsoil
5001			c.70/90-200	333	2389g	Layer over top of ditch 001
5002	C1D	Jar	LIA-400	1	12	Abraded
	C9C	Lid	c.70-250	1	7	Sl abraded
	SR1	Cooking-pot	c.400+	1	9	Fresh
	Tile			1	15	V abraded
			Post-Roman	3	28g	Fill of posthole
5003	C1D	Necked jar	c.70-150	11	92	
	C1E	Ev rim jar	c.270-400	7	119	
	C1F	Cooking-pot		1	20	
	C1P	Jar		1	10	
	C1	Jar	c.25BC-AD.150	1	6	
	combd	Jar	c.270-400	2	13	
	C2	Jar	c.120-300	5	21	
	C3	Jar	c.70-150	1	4	
	C8D		c.200-400	1	3	
	C10A	Closed		6	43	
	C16	5C bowl	c.150/70-250	1	13	
	C20		c.43-110	3	31	
	F1A		c.120-200	2	6	
	F1D	Beaker		1	13	
	F7	Beaker	c.200-275	1	2	
	F14	Beaker	c.160-400	1	1	
	F15B		c.240-400	15	50	
	F17A	Mortarium		1	37	
	F24			11	137	
	MISC					
			c.270-300	72	621g	F004 Fill of large posthole PH 13
5004	C1D	Girth-cordoned	c.LIA-250			Abraded
		jar		15	95	Abraded
	C1L	Jars		4	36	Abraded
	C1Q		c.350-400+	1	8	Abraded
	C2	Storage jar	c.270-400+	2	8	Abraded
	C5A		c.43-250	2	28	Abraded
	C16	Jar		1	12	Abraded
	C19	Jar		2	9	Abraded
	MISC	Jar		7	38	Abraded
	Tile		Roman	5	20	Abraded
			c.350-400+ or later	34	234g	007. fill of shallow burnt pit 5038
5005	C1D	5B.11 dish	c.150-270			Sl abraded
		5C.28 dish	c.370-420			v fresh
		Jar		26	189	fresh
	C1F			2	13	abraded
	C3	6/4 bowl	c.240-300	1	87	sl abraded
	C5A	Lid-seated jar	c.200-250	1	28	sl abraded
	C8B	Jars	c.250-350	3	19	abraded
	C8C	Ev rim jar	c.200-350	3	27	sl abraded
	C9B	Jar	c.250-350	1	9	abraded
	C9C	Jar		1	2	abraded
	C10A	3B.11 jar	c.270-400+	3	23	fresh
	C16	Jar		1	17	abraded
	F1D	Dr31	c.150-200			v abraded
		Dr33	c.120-200	7	44	v abraded
	F1E	Dr31	c.150-260	2	17	sl abraded
	F17A	Bowl	c.240-400	1	4	fresh
	F18A	Beaker	c.260-400	1	6	fresh
	MISC			9	49	
			c.270/370-400+	62	534g	001. Area of flints etc between E and W ditches and oven
5006	C1D	Lid	c.43-250			Fresh
		Asham pot	c.43-250	45	441	Fresh
	C8D	IIIE beaker	c.70-160	10	20	Sl abraded
	C9D	Poppyhead	c.70-200	1	57	Fresh
	C19	beaker		7	35	Fresh and abraded
	F1D		c.120-200	8	69	Abraded

	F5	Dr37	c.50-150	1	6	Fresh
	F24	?Flagon	c.100-150	1	29	Sl abraded
	F25	Flagon	c.50-150	8	62	Fresh
	MISC	Closed form		7	23	Abraded
			c.70-200	88	742g	001. Top fill of eastern ditch cut 5007
5008	MISC			4	124g	Topsoil
5009	C1D	Ev rim jars x3	c.270-400+	15	193	Fresh
	C1E	Jars		3	32	Fresh
	C1P	Beaded+fl bowl	c.370-400+	5	71	Abraded
	C8D	Closed		1	2	Fresh
	C10A	Jars	c.200-400	4	24	Fresh
	F17A	C51 bowl	c.240-400	6	93	Fresh
	MX	Mortarium	c.270-400	1	9	V abraded
	MISC			1	2	Abraded
	Tile			2	20	Abraded
			c.270-400+	38	446g	F003. fill of shallow ditch cut 5010
5011	C1D	Jar		1	6g	001. fill of ditch
5013	C1D	Ev rim jar				
		Str-sided dishx2	c.160-350			
		Lid-seated bowl				
		5C.1 jar	c.220-270			
		5C.2 jar	c.270-300			
		5C.12 bowl	c.150-270			
		5C.23 dish	c.200-350			
		Str-sided dish				
		5C.28 bowl	c.370-400+	186	1737	*
	C1E	Jars				
		5C.11 jar	c.270-400+			*
		5B.14 dish	c.150-270	53	585	
	C1P	Jars				*
		5F.11 dish	c.370-400+	17	161	*
	C8B	Incip b+fl bowl	c.250-300			
		Jarsx4	c.250-350	34	464	
	C8C	Jars	c.200-300			
		Indented beaker	c.270-350	27	109	
	C8D	Rouletted	c.200-270			
		beaker	c.160-200			
		Poppyhead bkr	c.270-350	24	222	
	C9B	Indented beaker	c.270-350	19	127	
	C9C/D	Jars		24	158	
	C10A	Ev rim jars	c.270-400			*
		Cl 3B jars	c.200-300	29	331	*
	C10B	Cl 3C jar	c.300-400	2	33	*
	C11	Jar	c.325-420	4	71	*
	C16	Hook rim jar		24	98	
	C19			8	48	
	C20					
		Ev rim jar	c.170-250	8	90	
	F1D	5C bowls x2	c.120-150			
		Dr27	c.170-200	25	132	
	F9A	Dr37 deeo	c.100-150	5	63	
	F12	2E1.1 beaker	c.150-200	1	1	
	F13	Beaker	c.130-250	2	15	
	F14	Hunt cup	c.200-275	16	9	
	F17A	Beaker	c.240-400	15	74	*
	F17D		c.240-400	1	1	*
	F18A	Closed	c.260-340	5	14	
	F25	Indented beaker		18	138	
	MX	Beaker	c.170-300	3	41	
		Wall-sided mort	c.150-200	1	21	
	A1	Mortarium		1	15	
	MISC	DR20		168	975	
			Mixed. Pit c.150-300. Ditch 370-400+. Ditch pot asterisked	710	5733g	F003. Ditch cutting large pit
5015	C1D	Jar		5	22	Fresh and abraded
	C1E	Jar		2	10	Fresh
	C8B	Jar	c.270-350	1	6	Abraded
	F25	Closed form		1	2	Fresh
			Not closely datable	9	40g	F006. fill of shallow ditch cut 5016
5017	C1D			23	140	

	C1E			1	3	
	C1P		c.350-400+	1	7	
	C3	Flanged bowl	c.120-160	1	11	
	C5A	Storage jar	c.100-250	5	88	
	C5B	Jar	c.150-250	5	57	
	C8D	Closed		2	4	
	C9C	Closed		1	6	
	C20	5C Jar	c.150/70-250	1	10	
	F1D			2	7	
	F7	Beaker		2	6	
	F12	Beaker	c.150-200	1	10	
	M3	Mortarium		1	107	
	MISC			6	75	
			c.150-250	52	531g	F002. top fill of oven 5173 above 5064
5018	C1D	5C.27 dish	c.350-400+			Fresh
		Ev rim jar	c.270-400+	22	215	
	C1E	Jar		6	77	
	C1P	5F.5 jar	c.370-400+	8	299	Fresh
	C8B		c.270-350	4	14	
	C10A	3B.10 jar	c.270-400+			Fresh
		3C jar	c.200-400			Fresh
		5B.10 bowl	c.350-400	13	158	Fresh
	F1D		c.120-200	7	53	
	F17A	Bowl	c.240-400	14	143	Fresh
	F20	Bowl	c.350/70-400+	1	10	Fresh
	F25	Indented beaker	c.200-400	3	11	Fresh
	M3	Mortarium		1	22	
	MISC			22	75	
	SR1		?Middle Saxon	1	10	Fresh
	Tile	Imbrex		1	28	Burnt fresh
			c.350/70-420	103	1115g	F001/003. fill of quad 1 across intersection
5020	C1D	Jarsx2	c.70-250	18	123	
	C1E			2	11	
	C1F	5C.27 dish	c.350-400+	1	29	*
	C1P	Ev rim jar	c.370-420	4	184	*
	C5B	Lid-seated jar	c.150-250	1	22	
	C8A	Jar	c.270-350	1	7	
	C8D	Jar		2	20	
	C10A	Jar base	c.300-400+	4	61	*
	F1D		c.120-200	5	26	
	F17D	P24 bowl	c.240-400	4	21	
	MISC			9	20	
	Tile			3	9	
			Asterisked pot from Ditch 003	54	533g	F001/003. fill of intersection cut 5021 below 5000
5021	C1D	Jars		2	13	
	C1F	Str-sided dish		3	59	
	C1P	Jar	c.370-420	2	63	Fresh
	C3	Ev rim jar	c.200-300	1	31	Fresh
	C8B	Beaded+fl bowl	c.270-350	1	17	
	C8E	Open form		1	19	
	C10A		c.200-400	5	20	
	C11	Jar	c.325-420	1	3	
	F1D			5	14	
	F17A	C71 bowl	c.300-400	2	12	Fresh
	F20		c.370-400	2	10	
	Tile			1	9	
				24	261g	F001/003 Cut ????
5022	C1D	Ev rim jar	c.270-400	5	11g	Fill of ?PH 5023
5026	C1D	Ev rim jar	c.270-400	2	12	Fresh
	C8F	Jar	c.300-370	1	4	Fresh
	F1D			1	2	Abraded
			4th c.	4	18g	Fill of PH 5027
5028	C1D	5C.8 jar	c.270-400	34	285	Fresh
	C1E			1	10	Sl abraded
	C8C	Jar basal		1	8	Abraded
	C8D			2	17	
	C8E	Jar		1	5	Sl abraded
	C19			1	15	Sl abraded
	F25	Biconical		1	29	Fresh

	F32	C71 bowl	c.300-350	19	201	Fresh
	MX	Mortarium	c.150-200	1	18	V abraded
	A1	DR20		1	37	Fresh
	MISC			3	18	Abraded
	Tile			5	97	
	?Kiln spacer			2	1	
			c.300-350	65	643g	Fill of shallow pit 5029
5030	C1D	Beaded+fl bowl	c.270-400	40	318	Abraded
	C1E	Ev rim jar	c.270-400	4	30	
	C1P		c.370-400+	4	35	Abraded
	C1Q	Storage jar	c.350-400+	1	20	Fresh
	C10A	3C jars x2	c.270-400	12	91	Fresh
	C11	Rilled jar	c.325-420	1	11	Abraded
	C16	Jar		1	37	Fresh
	C19	Jar		5	123	Abraded
	F14	Beaker	c.270-350	1	2	Abraded
	F17A		c.240-400	1	2	Abraded
	F20	Type 9 bowl	c.350/70-400	1	69	Fresh
	F25			2	70	Abraded
	SR1	Crude bowl	saxon	1	28	Fresh
	MISC			40	110	Abraded
	Tile			1	2	Abraded
	Fir clay			8	30	Abraded
			c.370-420+	114	946g	F003. Fill of cut 5031
5032	C1D	Jars		15	119	Fresh
	C1E	Jars		10	112	Fresh
	C1P			2	14	Sl abraded
	C5A	Carinated jar	c.100-150	8	146	Fresh 1 pot
	C19	Acute latticed jar	c.100-200	2	54	Fresh 1 pot
				3	3	
	G238	Beaker	c.80-150	4	55	
	MISC	Mortarium		6	19	
	Tile			2	18	
			c.80-150	50	522g	F001. fill of west double ditch
5034	C1D			4	15	Abraded
	C1E			1	5	Abraded
	C11	Rilled jar	c.325-420	1	2	Fresh
	C19			2	4	Abraded
			Post 325/70	8	26g	Post pipe 5035 fill
5036	C1D bl	Necked jar	c.100-160	14	121	Fresh
	C1D ox	Jars		8	104	Fresh
	C16			1	5	Abraded
	C21	Briquetage		1	2	Abraded
	F5	Necked jar	c.50-150	1	27	Fresh
	F25	Jar		3	10	Fresh (1 pink cored)
	Iron slag			1	6	
			c.100-160	28	269g	F001. fill of west double ditch
5037	C1L			1	15	V abraded
	C16			1	18	Sl abraded
	C19			1	5	V abraded
	F14	Beaker	c.200-275	1	4	Fresh
	F24			1	10	Abraded
	MISC			7	10	Abraded
			c.200-275 or entirely residual	12	62g	Fill of PH 5146 in Ditch 003 at intersection with 001
5039	C1D			4	44	Abraded
	C1E	5C.27 dish	c.350-400+	2	44	Fresh
	C1P	Ev rim jar	c.370-420	2	19	Fresh
	C8C	Necked jar	c.70-150	3	11	Sl abraded
	C10A	Jar	c.200-400	3	11	Abraded
	C16	Lid	c.70-200	1	10	Fresh
	F1A			1	2	V abraded
	SR1		c.450+	1	22	Fresh encr with slag
	MISC			2	40	Abraded
			5th c.or later	19	203g	Fill of PH 5040
5040	MISC			2	2	Abraded
	Tile			1	16	
	Slate		19th c	1		
			Modern	2	2g	Cut of posthole
5041	C1D			7	37	Abraded

	C1E			1	8	Abraded
	C1L			1	9	Fresh
	C8B			1	3	Abraded
	C8C			1	7	
	C10A			3	16	Sl abraded
	C16			1	2	Abraded
	C19			3	5	Abraded
	F1D			3	4	Abraded
	Tile			1	18	Abraded
			Residual deposited in 4th c. or later	21	91g	Fill of PH 5042
5043	C16		Residual	1	10g	V abraded. Fill of post pipe 5044 in 5034
5047	C1D	GB platter copy	c.43-150			Fresh
		Jar	c.43-200			Fresh
		Lid	c.43-250	26	321	Fresh
	C1E	Jar	c.70-150	24	364	Fresh and abr
	C1L	Jar		2	17	Fresh
	C5A	Jar	c.43-250	2	21	Fresh
	C19	Beaker	c70-200			Fresh
		Jar		6	46	Fresh
	F1A		c.43-110	1	1	Abraded
	F5	Flagon	c.50-150	2	8	Fresh
	F7	Ac latticed jar	c.70-150	1	4	
	F23	Small necked jar	c.70-150	32	84	Fresh all 1 pot
		Jar with ac lattice	c.100-200	1	9	Fresh
			c.70-150	97	875g	F001. fill of eastern ditch below 5005 above 5048.
5051	C1D	?CAM 1 copy		1	17	
	C3	Open form	c.120-300	3	12	Fresh
	C5A	Jar	c.50-250	1	6	Fresh
	C8B	Jar	c.270-350	1	2	Fresh
	C8E			1	2	Abraded
	C16	IIH jar	c.130-200	1	33	Fresh
	F1A		c.43-110	1	9	Sl abraded
	F2A	Flagon	c.43-70	1	2	Abraded
	A1	DR20		1	183	Fresh
	MISC			2	7	Abraded
			Backfilled during 3rd c.	13	273g	Posthole ext. cutting PH 5041
5053	C1A			1	1	
	C1D	Lid	c.70-250	7	208	Fresh 1 lid
	C1L	Misc jarsx6	c.70-200	81	708	Fresh and abraded
	C9D	Flask	c.70-200	1	14	Sl abraded
	C10A	6A2 dish	c.180-270	1	5	Fresh
	C11	Rilled jar	c.325-420	1	3	Fresh
	C16	?Amphora		14	385	Abraded 1 pot
	C19	Flagon		5	21	Fresh and abraded
	F7	Lid-seated	c.70-150	1	2	Fresh
	MX	beaker	c.80-150	1	94	Fresh
	MISC	Mortarium		12	44	Abraded
	Fired clay			3	14	
			c.325-420 with much residual pot	125	1485g	F007. Burnt area below 5004 in NW corner
5055	C1D	Jars		11	62	Fresh and abraded
	C1E	Jar		1	12	Fresh
	C1P			3	22	Abraded
	C4	8/2 dish	c.200-270	1	13	Fresh
	C8C			2	28	Abraded
	C10A	5B.8 bowl	c.270-400	14	181	Fresh
	F17A	C71.4 bowl	c.300-400	2	14	
	M9	Mortarium	c.150-250	1	134	Abraded
	MISC			8	31	
	Tile			12	46	
			c.200-400+	43	495g	F009. Top fill of Pit 5056 above 5063 = 5057, 5153, 5194
5057	C1D	Ev rim jars x3	c.270-400	14	115	
	C1L			1	9	
	C1P	Ev rim jars x2	c.370-420	9	79	
	C8B	Beaded+fl bowl	c.270-350	4	33	

	C8C	Hook-rim jar	c.270-350			
		Ev rim jar	c.270-350	7	53	
	C10A		c.270-400	1	4	
	F1D			3	3	
	F17A	C81 bowl	c.300-400	1	4	
	F18A	Beaker	c.260-400	2	7	
	F20	Bowl	c.350/70-400+	2	21	
	F25	Rouletted		1	2	
	MISC	beaker		17	101	
	Iron slag			1		
			Dumped after 350/370	62	330g	F009. top fill of W quad of pit above 5067. = 5055, 5153, 5194
5059	C1D	Jar		1	15	Abraded
	C5A	Jar	c.43-250	2	8	Abraded
	F26			1	14	Abraded
	MISC			4	2	Comminuted
			Residual	8	39g	Fill of PH 5060
5061	C1D	Jars	Residual	4	53g	Fill of PH 5062
5063	C1D	Jars etc		8	46	
	C1E			7	41	
	C1F	Jar		1	6	
	C1L			1	3	
	C1P		c.370-420	7	54	
	C3	Beaded+fl bowl	c.240-300	1	30	
	C5A	Jar	c.43-250	5	78	
	C8B	Indented beaker	c.270-350	8	60	
	C10A	3B.10 jar	c.270-400			
		3C jar	c.270-400			
		6A.10 dish	c.330-400	5	46	
	C10B	Jar	c.300-400	1	6	
	F17A	C63 bowl	c.340-400	6	24	
	F18A	Indented beaker	c.260-400	1	6	
	F20	Bowl base	c.350/70-400	1	10	
	F25	Beaker		1	2	
	MISC			10	24	
			Dumped after 350/370	63	436g	F009. 2nd fill of E quad of pit below 5055 above 5076
5064	C1D	Bead rim jar	c.43-100	7	32	Fresh and abraded
	C1E	Jar		4	16	Fresh
	C8C	Open form		1	9	Abraded
	C16			1	4	Fresh
	C19	Closed form	c.50-150	2	3	Fresh
	F26	Flagon	c.70-150	1	11	Fresh
			c.70-150	16	75g	F002.Fill of oven/hearth 5173 below 5017
5065	F18B	Closed	c.260-400	1	12g	Fresh. Fill of PH 5066 NE end of 001
5067	C1A			1	13	
	C1D			7	26	
	C1E	Str-sided dish	c.160-370	8	86	
	C1P	Ev rim jar	c.370-420	8	79	
	C6	Jar	c.180-300	1	4	
	C8D	Jar		3	22	
	C8F	Jar		1	14	
	C10A	6A.4 dish	c.270-350/400	2	42	
	C16	Jar		7	87	
	C19	Bowl		10	85	
	F1D			4	14	
	F1E			1	9	
	F17A	C63 bowl	c.340-400+	6	32	
	MX	Wall-sided mort		1	14	
	MISC			9	46	
	Tile			1		
			Dumped after 350/370	69	573g	F009. 2nd fill W quad of pit
5068	C1A	Jar		2	6	
	C1D	Ev rim jarsx2	c.43-250			
		Lid-seated	c.150-250	47	393	
	C1E	bowlx2	c.100-250	22	340	
	C5A	Ev rim jar	c.120-160	2	23	
	F1A	Flanged bowl		3	4	
	F5		c.50-150	9	5	
	F9A	Flagon	c.120-150/90	5	15	

	F25	2I3 beaker		1	8	
	A1	Flask		2	100	
	MISC	DR20		3	6	
			c.100-200	96	900g	Fill of linear 5069
5070	C1D	Storage jar		4	44	Fresh
	C1E	Jar		3	21	Fresh
	C8D	7A.2 dish	c.43-140	3	10	Fresh
			c.43-140	10	75g	Fill of Slot 5071 in small NE-SW linear
5074	C1D	Jar		2	6	Abraded
	C8B	Jar		1	1	Abraded
	C8E			1	1	Fresh
	C20	5F dish	c.130-270	2	10	Fresh
	F17A	C51 bowl	c.240-400	1	23	Abraded
	F32	Bowl	c.250-350	1	72	Fresh
			c.250+	8	113g	Fill of PH 5075
5076	C1D	5C.26 dish	c.200-370	6	54	
	C1F	Jar		3	27	
	C1P	Jar	c.370-420	2	56	
	C3	Open form	c.290-350	1	12	
	C10A	6A.13 dish	c.270-400+	3	34	
	C11 fine	Necked jar	c.325-420	3	17	
	C28	Jar	c.180-370	1	2	
	F1A	Dr 33	c.43-110	2	6	
	F1D		c.120-200	1	8	
	F17A	Bowl	c.240-400	2	16	
	MISC			1	5	
			c.300-400+	25	237g	F009E. Fill of scoop/PH below 5063
5077	C19	Beaker	c.200-300	1	1g	Fill of PH 5078
5085	C1E	5C.26 dish	c.200-370	2	20	
	C1F	Jar		2	32	
	C8F	Jar	c.300-370	1	8	
	C10A	Open form	c.270-400	1	4	
	F17A	C85 bowl	c.350-400	2	82	
	F20	Bowl	c.350/70-400+	2	73	
	Tile			1	66	
			Dumped after c.350/70	10	219g	F009. 4th fill of W quad of pit below 5067
5086	C1A	Jar	c.25BC-AD100	14	234	Fresh 1 jar
	C1D	Neck-cordnd jar	c.70-200			Fresh
		Misc jarsx3	c.70-200			Fresh and abraded
		Lid	c.70-250			
		Dish	c.70-150	67	993	Fresh. 6 from bowl
	C1E	Jars	c.50-150	10	311	Fresh
	C1F	Jar	c.50-200	5	134	Fresh
	C5A	Rusticated jar	c.70-120	35	720	Fresh 1 jar
	C19	Jar		6	38	
	F1			1	1	Abraded
	F7	Beaker	c.50-150	5	17	Fresh
	F25	Biconical bowl	c.70-150	11	118	Fresh
		Butt beaker	c.50-100	6	59	Fresh 1 pot
		Bowl with moulded rim	c.100-150	9	70	Fresh
			c.70-200	169	2695g	F001. fill of western ditch cut 5087 adj to oven
5089	C1E	Jar		1	5	
	C10A	Closed	c.270-400	2	42	
	C19	Colander		1	28	
		Ev rim jar	c.200-400	1	30	
	F17A	C51 bowl	c.240-400	1	58	
	F25	Beaker base		1	10	
			c.270-400	7	173g	F009. lower fill of W quad of pit 5058 below 5067
5090	C1D	Jar	c.70-250	3	128g	Fill of Cut 5091
5092	C17A	Rouletted bowl	c.240-400	1	2g	Abraded. Fill of PH 5093
5094	C1D	Ev rim jar	c.270-400	9	37	
	C1E	Jar		3	41	Fresh
	C1F	Ev rim jar	c.270-400	2	22	Fresh
	C1L	Jar		1	6	Sl abraded
	C1P	5F.12 Dish	c.370-420	5	84	Fresh
	C9B	Jar	c.270-350	1	15	Fresh

	C8F	Necked jar	c.300-400	1	7	Fresh
	C10A	Ev rim jar	c.270-400	8	57	Fresh
	C11	Hook-rim jar	c.325-420	1	9	Sl abraded
	F17A	C81 bowl	c.300-400	5	14	
	MISC			8	36	
			Dumped 370+	44	328g	F010. top fill of E quad of Pit 5095 = 5102, 5155, 5157
5098	C1L	Ev rim jar	c.200-250	1	56	Fresh
	C3	Open form	c.160-300	1	12	Fresh.
	C5B	Ev rim jar		1	12	Fresh
			c.200-250	3	80g	Fill of ovoid feature 5099
5100	C1D	Necked jar				
		Str-sided dish	c.160-370	20	177	
	C1E	Ev rim jar	c.270-400			
		Str-sided dish	c.160-370	8	84	
	C1F	Hook rim jar	c.300-400	1	3	
	C1L	Jar		2	29	
	C1L var	Ev rim jarsx2	c.400+			Vesicles inc chaff
		Convex-sided	c.400+	7	66	Vesicles inc chaff
	C1P	dish	c.370-420			
		Ev rim jarsx6	c.370-420			
		5F.3 jar	c.370-420	65	1267	
	C1Q	5F.14	c.350-400+	1	47	
	C8C	mortarium		5	42	
	C8E	Storage jar		1	15	
	C8F	Jar	c.350-400+	2	25	
	C9C	5F dish		1	14	
	C10A	Convex-sided	c.270-400			
		dish	c.270-400	34	830	
	C11	Ev rim jar	c.325-400			
		Store jar	c.350-420	16	289	
	F1D	Ev rim jar		5	7	
	F1E	Rilled jarx2		1	5	
	F14	Convex-sided		2	3	
	F15B	dish	c.200-275	1	3	
	F17A		c.160-400			
			c.240-400			
			c.350-400+	41	491	
	F17C	Beaker	c.240-400	1	25	
	F18B	Closed	c.260-400	1	3	
	F18D	C51 bowl	c.270-350	2	15	
	F20	C85 bowl	c.350/70-400+	3	14	
	F25	WC4 mortarium		1	26	
		Indented beaker		1	13	
	A1	Indented beaker		2	177	
	AX			1	13	
	MISC	Storage-jar		24	107	
	Tile	Mortarium		4	103	
		DR20				
			c.350-420+	249	3790g	F003. fill of ditch cut 5104 below 5000
5101	C1E	Dish	c.70-150			As 5086
		Necked jar	c.70-150	7	412	
	C1L	Necked jars	c.70-150	59	1991	
	C5A	Ev rim jar				
		Poppyhead	c.130-200			
		beaker	c.70-150	17	484	As 5086
	C8D	Rusticated jar	c.100-200	21	292	
	C9C	Flask		1	6	
	C19	Closed	c.100-200			
		Ev rim jar	c.70-150	11	195	
	F1D	Lid-seated dish	c.120-200	1	4	
	F9A		c.130-160	10	37	
	CGWH	Poppyhead	c.60-120	1	13	
	A1	beaker		2	32	
	MISC	Beaker		18	68	
	Tile	DR20		1	11	
			c.70-150	148	3534g	F001. Lower ditch fill
5102	C1D	Ev rim jar	c.200-400	16	130	Fresh
	C1E	Jar		8	80	Fresh
	C1L			1	5	Fresh

	C1P	Strainer	c.370-420	9	141	Fresh
	C3	Jar		1	5	Fresh
	C8B	Jar	c.270-350	1	19	Sl abraded
	C9F	Jar	c.300-400	1	11	Fresh
	C10A	Ev rim jar	c.270-400	7	47	Fresh
	C10B	Cl 3C jar	c.300-400	1	20	Fresh
	F1D			3	7	Abraded
	F17A	C51 bowl	c.240-400	5	13	
	F18A	Closed	c.260-400	1	5	
	F20	Bowl base	c.350/70-400	1	49	Fresh
	MISC			5	28	
	Tile			2	9	
	Fir clay			19	46	
			c.350-420	60	560g	F010. Top fill of W quad of pit above 5164
5105	C1D	Jar		2	13	Fresh and abr
	C1E	Jar	c.270-400	3	27	Fresh and sl abr
	C1F	Ev rim jar	c.270-400	2	7	Fresh
	C8E	Jar		1	12	Abraded
	C10A	Closed	c.270-400	2	10	Fresh
	C16	Flagon		1	4	Fresh
	F17A	C51 bowl	c.240-400			Sl abraded
		Mortarium	c.240-400	4	15	Sl abraded
	F25	Jar		1	5	Fresh pink core
			c.270-400	16	93g	F008. fill of ditch cut 5106 below 5108
5107	C1D	Dish	c.200-400	7	69	Fresh
	C1E			2	53	Fresh
	C1L			8	112	Fresh
	C1P	5C.11 jar	c.350/70-420			Fresh
		5C.28 dish	c.350/70-420	25	328	Fresh
	C2	Jar	c.270-400	1	32	Fresh
	C5A	5F dish	c.130-270/300	3	30	Fresh
	C10A	Cl 1C storage jar	c.270-400+	15	268	Fresh
	C11	Rilled jar	c.325-420	4	34	Fresh
	C16	Flagon handle		2	52	
	F1D			2	2	Abraded
	F17A	Flagon handle	c.240-400	3	15	
	F18A	Beaker	c.260-350	1	5	Fresh
	F20	Mortarium	c.350/70-400+	1	25	Abraded
	A1	DR20		1	17	Burnt
	MISC			3	7	
			c.350-420	78	1049g	F003.Top clearance of ditch.
5109	C1D	Jar		6	134	Fresh and abr
	C1E	Jars		8	112	Fresh and abr
	C8F	Closed	c.300-400	1	9	Fresh
	C10A	Jar	c.270-400	1	11	Fresh
	F1D	Dr38	c.140-200	2	6	V abraded
	F17A	C81 bowl	c.300-400			Fresh
		Beaker	c.240-400	4	32	Fresh
	MISC			2	7	
			c.300-400	24	311g	F003/008. fill of junction below 5107
5110	C1P	Jar	c.370-420	4	41	Fresh
	F20	Bowl base	c.350/70-400+	1	85	Fresh
			c.370-420	5	126g	F010. lowest fill of pit below 5165
5111	C1A	Necked jar	c.LIA-150	3	39	
	C1D	Jarsx8	c.70-250			
		5B.11 dish	c.150-270	107	1238	
	C1E	Str-sided dish	c.160-350	13	149	
	C4	Str-sided dish	c.250-300	4	22	
	C8/9C	Ev rim jarsx2	c.200-350			
		5C bowl x2	c.150/70-250	28	271	
	C8/9D	Ev rim jarsx2	c.250-350			
		Beakersx2	c.250-350			
		1B7 flask	c.120-190			
		5B3 bowl	c.70-130	48	440	
	C8E	Closed		2	10	
	C10A?	Jar		1	14	
	C16	Necked jars		63	349	
	C19	5C bowl	c.150/70-250			
		Hook-rim jarsx2	c.200-300			
		Ev rim jar		38	387	

	C20	5C bowl	c.150/70-250			
		Ev rim jarsx4	c.170-250			
		5E dish	c.160-270	19	173	
	F1D	Dr31	c.150-200			
		Dr33x2	c.120-200			
		Dr37	c.120-200			
		Dr44	c.130-200			
		Dr45	c.170-200	28	195	
	F9A	2A5 beaker	c.160-200			
		5F dish	c.130-270	12	69	
	F12	Cup	c.150-200	4	13	
	F14	Beaker	c.200-270	12	9	
	F15	Beaker	c.160-270	1	1	
	F17A	Bowl	c.240-400	1	9	
	F18A	F27 beaker	c.260-340			
		F44 beaker	c.300-350	5	56	
	F24	Bowl		2	44	
	A1	DR20		1	123	
	MISC			49	177	
			c.250-300+	441	3788g	Fill of pit at end of Ditch 003
5114	C1D	Jars	c.70-200	13	177	Fresh
	C1E	Necked jarsx3	c.70-250	26	550	Fresh
	C5B	Dish		12	110	Fresh
	C6	Jar	c.180-270	1	3	Fresh
	C8C	5B5 dish	c.70-130	3	94	Fresh 1 pot
	C8D			3	50	Fresh and abr
	C16			4	25	
	C21	Briquetage		18	47	
	F1A		c.43-110	1	4	Sl abraded
			c.70-200	81	1070g	F001. fill of ditch cut 5115 below 5001
5116	C1A	Jarx3	c.70-250			
		Str-sided dish x2	c.160-270	42	349	
	C1D	Jar		1	27	
	C1E	Ev rim jars	c.200-270+	25	224	
	C1L	Jar		5	72	
	C1 comb	Jar	c.43-150	1	1	
	C2			1	5	
	C5A	Jar		1	58	
	C7	5C bowl	c.150/70-250	1	6	
	C8B	Jar	c.270-350	1	9	
	C8C	Closed		6	26	
	C8D	Cl 3C jar	c.180-250			
		5C bowl	c.150/70-250			
		Indented beaker	c.200-270	14	154	
	C9B	Jar		6	112	
	C9C	2A6 beaker	c.190-230			
		5E1.8 dish	c.160-300	16	233	
	C9D	1A1 flagon	c.180-270	11	67	
	C16			5	34	
	C20	5C bowl	c.150/70-250	2	20	
	F1D	Dr 31	c.150-200			
		Dr 37	c.120-200	3	31	
	F7	Beaker		1	3	
	F9A	Beaker		1	5	
	F11	w/p beaker	c.230-300	1	12	
	F12	beaker	c.150-200	2	8	
	F18C	type 91 jug	c.300-350	1	88	
	MISC			57	243	
			c.200-300/50	204	1787g	F004. Fill of PH 1 Packing and post pipe not separated
5118	C1D	Jars		19	128	
	C1E	Necked jarsx3	c.100-250			
		Flanged bowl	c.120-200	19	455	
	C1L	Str-sided dish	c.160-270			
		Bead-rim jar		12	162	
	C1Q	Storage jar	c.350/70-420	2	107	
	C3	Incip b+fl bowl	c.210-280/90	3	13	
	C5B	Jar		6	56	
	C8A/B	5F dish	c.130-270			
		Beaded+fl bowl	c.270-350	12	249	
	C8C	Moulded bowl	c.100-250			

		Biconical	c.43-130			
		5B5 dish	c.70-130	24	138	
	C8D	Beaker		7	70	
	C9A	Closed		1	12	
	C9C	Closed		8	77	
	C9D			3	12	
	C11	Rilled jar	c.325-420	1	7	
	F9A	Rouletted	c.190-280	1	2	
	F11	beaker	c.160-270	4	43	
	F17A	Beaker	c.240-400	1	55	
	F24	Bowl base		14	63	
	F25	Closed form		3	55	
	MISC	Jar		15	98	
			c.70-350/70+	155	1802g	F004. fill of PH 2 below 5145. above 5119
5120	C1D	Ev rim jar	c.200-400	10	54	
	C1E	Jars		14	101	Fresh and abraded
	C7	5C bowl	c.150/70-250	5	30	
	C8C	Closed		2	14	Fresh
	C16	5C bowl	c.150/70-250	1	25	Fresh
	F1D		c.120-200	3	6	V abraded
	F7	Poppyhead		1	2	Sl abraded
	F9A	beaker		1	3	Fresh
	F25	Closed	c.130-250	2	9	Fresh
		Corniced beaker				
			c.130-250	39	244g	F004. fill of PH 3 above 5121
5122	C1D	Ev rim jar		28	153	Fresh and abraded
	C1E			16	160	Fresh and abraded
	C1P		c.350/70-420	12	91	Fresh and abraded
	C8B	Necked jar	c.270-350			Fresh
		5F dish		3	33	Abraded
	C9B	Necked jar	c.270-350	9	135	
	C10A	Cl 3B jar	c.270-400			Abraded
		Cl 5B bowl	c.270-400	9	64	Abraded
	C20	Open form		3	23	Fresh
	F25	5B5 dish	c.70-130	1	16	Fresh
	MISC			41	154	
			c.270-400	122	829g	F004. fill of shallow PH 4. sealing post pipe 5246
5124	C1D	Necked jar	c.100-250			Sl abraded
		Str sided dish	c.160-270	10	80	Fresh
	C1E	Necked jar	c.100-250	3	16	Abraded
	C1L	Necked jarx2		7	64	Fresh
	C1P	5F.7 bowl	c.370-420	7	68	Fresh
	C5A	Hook-rim jar	c.300-400	2	9	Fresh joining
	C8B	Jar base	c.270-350	3	36	Abraded
	C8C	Jar		1	1	Abraded
	C9B	Indented beaker	c.270-350	1	18	Sl abraded
	C10A		c.270-400	7	47	Abraded
	C19			1	1	
	F1D			1	2	Abraded
	F9A	Beaker		1	6	Fresh
	F25	Ac latticed jar		1	5	Abraded
	MISC			13	24	Abraded
	Tile			1	7	
			c.300-400	58	384g	F004. fill of shallow PH 5
5126	C1D			10	80	Fresh and abraded
	C1P		c.370-420	5	22	Abraded
	C8B	Jar	c.270-350	3	34	Fresh and abraded
	C9C	Jar		1	5	Abraded
	C16	Closed		2	8	Fresh
	C19	5C bowl	c.150/70-250	2	16	Fresh
	F1D			1	1	Abraded
	F25	Beaker	c.260-400	1	10	Fresh
	MX	Wall-sided mort	c.240-350	2	16	Abraded
	MISC			2	6	Abraded
	Tile			1	6	Fresh
			c.270-400 or residual	29	198g	F004. fill of shallow PH 6
5128	C1D	Ev rim jar		26	214	Abraded
	C1E			1	8	Abraded
	C1P		c.370-420	8	61	Fresh and abraded

	C8C			2	16	Abraded
	C9B	Necked jar	c.270-350	8	50	Abraded
	C9C	Beaker	c.270-350	8	53	Abraded
	C9D	Closed		1	6	Fresh
	C10A	Cl 3C jarsx2	c.270-400	8	52	Fresh and abraded
	C16	Jars		6	41	Abraded
	C19	Jar		3	20	Abraded
	C20	5C bowl	c.150/70-250	2	13	Abraded
	F1D			2	4	Abraded
	F11	Beaker	c.200-270	3	19	Abraded
	MX	Mortarium base		1	184	Abraded
	A1	DR20		3	288	
	MISC			16	34	Abraded
			Residual	98	1063g	F004. fill of PH7 post-pipe
5130	C10A	6C.1 dish	c.330-400+	2	10	Abraded
	C16			2	6	Abraded
	F1D			2	3	Abraded
			Residual	6	19g	F004. fill of PH8 post pipe
5132	C1D	Asham pot	c.LIA-200			Fresh
		Jar		6	48	Fresh
	C9B	Jar	c.270-350	1	10	Fresh
	C19			2	6	Abraded
	MISC			1	1	Abraded
			3rd c	10	65g	F004. upper fill of PH 9 below 5142 and 5143
5134	C1D			1	3	Abraded
	C1P	Jar	c.370-420	2	8	Fresh and v abr
	C5A	Jar		1	12	Sl abraded
	C9B	Hook rim jar	c.270-350	1	5	Abraded
	C9D	Open form		1	2	Fresh
	C10A	Jar	c.270-400	1	24	Sl abraded
	C11	Jar	c.325-420	1	1	Abraded
	C16			3	4	Abraded
	C19			2	15	Abraded
	F1D			1	4	Abraded
			Residual	14	78g	F004. fill of PH 10 post pipe
5136	C1D			1	2	Sl abraded
	C7	Beaded+fl bowl	c.240-370	3	21	Fresh
	F9A	Beaker		1	2	Fresh
	F24	Closed		1	2	Abraded
	MISC			2	5	Abraded
			c.240-370	8	32g	F004. fill of PH 11 post pipe
5138	C1D			4	26	Fresh and abr
	C1E	5C.27 dish	c.350/70-400+	2	28	Fresh
	C1L	Jar		1	4	Fresh
	C1H	Jar		1	17	Fresh
	C8B	jar	c.270-350	1	7	Sl abraded
	C9F	Jar	c.300-400	2	9	Fresh
	C10A	6A.4 dish	c.270-400	3	71	Fresh and sl abr
	C16	Bead-rim jar	c.70-100	4	49	Abraded
	F11	Indented beaker	c.200-270	1	2	Fresh
	F17A		c.240-400	2	4	V abraded
	F25	Jar		4	20	Fresh 1 jar
	MISC			9	22	
	Tile			2	164	
			c.350/70-400+	34	259g	F004. fill of PH 12
5140	C1E			2	5	Fresh
	C1P	Colander	c.370-420	3	34	Fresh
	F1D			1	3	Sl abraded
	F17A		c.240-400	1	1	Abraded
			c.370-420	7	43g	F004. fill of small post-pipe within fill of PH 8
5142	C1D	Str-sided dish	c.150-370	1	9	Sl abraded
	C10A	Closed	c.270-400	1	1	Sl abraded
	F1D			1	7	Abraded lump
			Residual	3	17g	F004. fill of post pipe 5143 in PH 9
5144	C8B	Closed		1	3	Fresh
	C8C	Closed		2	5	Fresh
	F24	Closed		1	2	Sl abraded
			Residual	4	10g	F004. fill of post pipe in PH 2
5147	C1D	Ev rim jar	c.270-400	3	15	Abraded

	F17A	Closed	c.240-400	1	42	Sl abraded
	F24	Closed		1	1	
	F25	Beaker		1	1	
	MISC			1	1	
			Residual	7	60g	F004. lower fill of post pipe 5135 in PH 10
5148	C1D	Jar		6	55	Fresh
	C8C	Indented beaker	c.250-350	1	5	Sl abraded
	C19	Jar		1	4	Fresh
				8	64g	F004. fill of post pipe in PH 3 below 5120 in shallow PH 5121
5150	C1D	Jars		3	12	Abraded
	C1P	5F.8 bowl	c.370-420	4	54	Fresh
	C3	Ev rim jar	c.280-370	2	24	Fresh
	C10A	Closed form	c.270-400	3	16	Fresh and abraded
	F1D			1	11	Abraded
	F17A	C45 bowl	c.270-400+	3	20	Abraded
	F20	Bowl	c.350/70-400+	1	6	Fresh
	SR1		Saxon	2	42	Fresh joining
	MISC			3	8	Abraded
	Tile			2	11	
			350/70-450+	22	193g	F006. fill of ditch cut 5151
5153	C1D			5	34	Abraded
	C1E			3	22	Abraded
	C1P		c.370-420	2	12	Fresh and abr
	C1Q	Storage jar	c.350-420	2	50	Fresh
	C10A	Beaded+fl bowl	c.270-400	3	50	Fresh
	C11	Rilled jar	c.325-420	1	3	Abraded
	F9A	Beaker base	c.250-400	1	9	Fresh
	F17A	Bowl	c.240-400	2	10	Abraded
	F20	Bowl	c.350/70-400+	1	7	Sl abraded
	F25	Jar		2	16	Fresh
	MISC			6	38	
			c.370-420	28	251g	F009. top fill of N quad over 5154
5155	C1P	Jar	c.370-420	2	5	Fresh
	MISC			1	3	Abraded
	Fir clay			1	1	
			c.370-420	3	8g	F010. Top fill of N quad of pit. = 5157,5102,5094 above 5156
5157	C1E			3	8	Fresh
	F5			1	1	Abraded
	Fir clay			2	6	
			Not closely datable	4	9g	F010. Top fill of S quad of pit above 5169
5159	C1D	Ev rim jar	c.270-400			Fresh
		Beaded and fl	c.270-400	24	252	Fresh
	C1E	bowl	c.270-400	13	135	Fresh
	C1P	Ev rim jar	c.370-420	12	101	Fresh
	C2	Ev rim jar	c.270-400	2	28	Fresh
	C3	Jar	c.280-370	1	11	Abraded
	C8B	Ev rim jar		1	2	Fresh
	C8D			7	30	Sl abraded
	C9F		c.300-400	1	2	Fresh
	C10A		c.330-400			Fresh
		1C.6 storage jar	c.270-400			Fresh
		3B jar	c.270-370/400	16	187	Fresh
	C11	6A4 dish	c.325-420	3	24	Fresh
	C19	Rilled jars		5	32	Fresh and abr
	F1D			4	5	Abraded
	F17A		c.240-400	8	23	Abraded
	F17E		c.300-400	1	16	Sl abraded
	F18A	W24 jug	c.260-400	1	42	Fresh
	F20	Beaker base	c.350/70-400+	2	17	Fresh
	MISC	Bowls		12	32	Abraded
	Tile			1	7	Fresh
			Dumped after 370	113	939g	F009. 2nd fill of N quad of pit
5160	C1P	Jar	c.370-420	1	21	Fresh
	F1A		c.43-110	1	2	Abraded
				2	23g	F005. fill of linear 5161
5165	C8B	Open form	c.270-350	1	20	Fresh
	C9F	Closed	c.300-400	1	4	Fresh

	F24 Fir clay	Bowl	?4th c	1 2	6 1	Fresh
			c.270-400	3	30g	F010. 3rd fill W quad of pit below 5154 above 5110
5166	C1D C1L C1P F1D Fir clay	 Jar ?Mortarium 	 c.370-420 	3 1 1 1 1	13 33 34 2 19	Oxidised Fresh oxidised Fresh oxidised Abraded
			c.370-420	7	101g	Fill of burnt depression 5174 north of 5003
5167	C1D C1P C8B C8F C10A C19 F17A F18B MISC	 Necked jar Jar Jar Jars Jar C46 bowl Open form 	 c.370-420 c.270-350 c.300-400 c.270-400 c.340-400 c.260-400 	3 7 1 1 4 3 6 1 3	21 39 4 10 23 14 36 1 4	Abraded Fresh Fresh Fresh Fresh Fresh Fresh Fresh
			c.270-420	29	152g	F010. 3rd fill N quad in pit below 5169. Above 5201
5168	C1D C1P	Jar Str-sided dish	 c.370-420	1 5	5 52	Fresh Fresh
			c.370-420	6	57g	F010. 3rd fill in S quad of pit above 5170
5169	C1D C1E C1F C1P C3 C8B C8C C10A F12 F17A MISC	Ev rim jar Jar Jar Obtuse lattice Beaker Beaker Bowl 	 c.370-420 c.200-400 c.270-350 c.270-400 c.150-200 c.240-400 	12 1 1 8 2 2 1 10 1 3 5	75 15 18 68 9 6 2 63 2 17 51	Fresh and abr Abraded Abraded Fresh and abr Fresh Abraded Sl abraded Fresh and abr Abraded Abraded Abraded
			c.270-420	46	326g	F010. 2nd fill N quad below 5155. above 5168
5177	C1L C16 F25	Jar Hook rim jar	 c.200-400	1 1 2	24 1 12	V abraded V abraded Fresh
				4	37g	F011. fill of PH 5178
5179	C1P C20	 Open form	 c.150/70-250	1 1	4 20	Abraded Fresh
				2	24g	F011. fill of post pipe 5180 in PH 5255
5181	C1D C10A	Str sided dish Closed form base	c.160-370 c.270-400	1 1	2 21	Fresh Fresh
			c.270-400	2	23g	Fill of small PH 5182
5183	C20 F1D	Open form Dr 33	c.150/70-250 c.120-200	1 1	6 6	Fresh Abraded
			c.150/70-250	2	12g	F011. fill of small PH 5184
5185	C10A MISC	Open form 	c.270-400 	1 1	49 2	Fresh Abraded
				2	51g	F011. fill of small PH 5186
5187	C16	Dish	N.C.D	2	7g	F011. fill of small PH 5188
5189	C1D C1E C8A C10A F1D F17A F18B MISC	Jars Jar basal Closed Dr37 Closed 	 c.270-350 c.270-400 c.120-200 c.240-400 c.260-400 	4 1 1 1 2 1 1 1	39 10 27 5 4 2 9 1	Fresh and abr Fresh Abraded Fresh Abraded Abraded Sl abraded Abraded
			c.270-400 or residual	12	97g	F011. fill of small PH 5190
5191	C1A C1E C1P C1Q C8C	Dish Jars Storage jar Combed jar	 c.350-400+ c.270-350	1 3 1 1 2	2 16 4 29 8	Fresh Abraded Fresh Sl abraded Fresh

	C9B	Jar	c.270-350	1	1	Abraded
	C9C	Jar		1	4	Fresh
	C10A	Closed	c.270-400	3	8	V abraded
	C11	Rilled jar	c.325-420	1	1	Abraded
	C16	Storage jar		1	14	Abraded
	F1D			2	4	Abraded
	F11	Jug handle	c.270-400	1	7	Abraded
	MISC			1	1	Abraded
	Tile			2	4	Abraded
			Residual	19	99g	F011. fill of small PH 5192
5193	C1D			1	24	Abraded
	C1P	Jar	c.370-420	3	66	Fresh
	C10A	Closed	c.270-400	1	3	Fresh
	F18B	Form 67 bowl	c.300-370/400	1	15	Fresh
	MISC			8	19	Abraded
			c.300-400	14	127g	F009. 3rd fill N quad of pit below 5159 above 5212
5194	C1D	Jar		6	95	
	C1E	Jar		5	74	Fresh
	C1P		c.370-420	6	73	Fresh
	C8B	Jar base	c.270-350	1	14	Fresh
	C9C	Jar		2	11	Sl abraded
	C10A	Inc store jar	c.270-400	7	115	Fresh and sl abr
	C11	Rilled jar	c.325-420	2	10	Fresh
	F1D			2	9	Abraded
	F17A		c.240-400	2	4	Abraded
	MX	Mortarium		1	24	Sl abraded
	MISC			9	39	
			Dumped after 370	43	468g	F009. top fill ob S quad of pit above 5197. 5198, 5195, 5196
5195	C1P	Jar	c.370-420	2	33	Abraded
	C5B	Jar		1	3	Sl abraded
	C8C	Jar		1	4	Abraded
	C10A	Jar	c.270-400	1	12	Abraded
	C16	Jar		1	9	Abraded
	F17A	Bowl base	c.240-400	2	25	Abraded
			Residual	8	86g	F009. 2nd fill of S quad above 5197, 5196, 5198
5197	C1D	Ev rim jar	c.270-400	3	44	Fresh
	C1F	Jar		1	12	Fresh
	C2	Ev rim jar	c.270-400	2	110	Fresh
	C7	Jar	c.180-370	1	4	
	C9B	Jar	c.270-350	1	3	Abraded
	C9C	Jar		1	26	Sl abraded
	C9F	Jar		1	5	Fresh
	C10A	Storage jar	c.270-400			Sl abraded
		Jar	c.270-400	6	193	Fresh
	F17A	C75 bowl	c.325-400+	1	5	Fresh
	MX	Mortarium		1	8	Abraded
			c.325+	18	410g	F009. fill = 5193, 5089, 5076
5198	C1D	Jar		2	68	Fresh
	C1P	Jar		2	24	Fresh
	C8C	Jar		1	9	Fresh
	C10A	Jar	c.270-400	1	14	Fresh
	C11	Lid-seated jar	c.370-420	2	32	Fresh
	F1D			1	1	
	F17A	C81 bowl	c.300-400	2	15	Fresh
	F25	Jar		1	8	Fresh
	Tile			1	7	
			Dumped 370+	12	171g	F009. 4th fill in S quad above 5224
5199	C1D	Jar		2	20	Fresh
	C1E	Jar	c.270-400	3	55	Fresh
	C1F	Ev rim jar	c.270-400	1	10	Sl abraded
	C1P	Ev rim jar	c.370-420	2	14	Fresh
	C3	Open form		1	3	Fresh
	C10A	Closed	c.270-400	2	9	Fresh
	F17A	Bowl	c.240-400	1	6	Sl abraded
	Fir clay			4	11	
			Dumped 370+	12	117g	F010. fill of pit = 5011, 5170
5200	C1E	Jar		2	14	Fresh
	C1P	Jar	c.370-420	3	26	Fresh bloated

	C10A	Cl 3B jar	c.270-400	1	18	Fresh
			c.370-420	6	58g	F010. fill of pit. = 5010, 5170, 5199
5201	C1D			8	26	Abraded
	C1P	Mortarium	c.370-420	1	8	Abraded
	C10A	Closed	c.270-400	1	2	Sl abraded
	C11	Rilled jar	c.325-420	1	4	Sl abraded
	C16			1	1	Abraded
	C19			2	6	Abraded
	F1D			1	2	Abraded
	MISC			2	4	Abraded
			Residual	17	53g	F004. Fill of SE half of post pipe of PH 8
5204	C1D	Jar		13	100	Fresh
	C1G	Jar	c.70-250	3	109	Fresh 1 jar
	C8D	Jar		3	18	Fresh
	C9D	Beaker		1	7	Fresh
	C19	Rusticated jar	c.70-150	7	31	Fresh 1 jar
	F13	Corniced beaker	c.130-250	11	76	Fresh 1 pot
	MISC			3	29	
			c.70-250	41	370g	F001. fill of cut across ditch
5206	C1E	Ev rim jar	c.270-400			Fresh
		5C.17 bowl	c.270-350			Fresh
		5C.27 dish	c.350/70-400	16	139	Fresh
	C1P	Ev rim jars x5	c.370-420			Fresh
		5C.30 dish	c.370-400	19	288	Fresh
	C3	Ev rim jar		1	3	Fresh
	C8B		c.270-350	3	27	Sl abraded
	C8C	Ev rim jar		5	42	Friar
	C10A		c.270-400	7	27	Friar
	C10B	Storage jar	c.200-400	1	29	Friar
	C19	Jarsx2		5	33	Abraded
	F1D			3	7	Abraded
	F11	Jar	c.270-400	1	8	Abraded
	F14	Beaker	c.200-275	1	1	Fresh
	F17A	Bowl	c.240-400	2	18	
	F20	Bowl	c.350/70-400	1	3	Fresh
	F25	Ev rim jar		2	28	Fresh
	MISC			10	41	
	Fir clay			1	6	
			c.350/70-420	77	694g	F003. fill of cut 5207 = 5009 and 5100
5208	C1D	Jar		1	4	Fresh
	C1L	Ev rim jar	c.270-400	3	27	Sl abraded
	C1P	Jar	c.370-420	1	10	Sl abraded
	C10A	Jar	c.270-400	3	9	Abraded
	C11	Rilled jar	c.325-420	3	32	Abraded
	C19	Jar		8	68	
	C20	Jar		1	4	Fresh
	F1D	Bowl	c.120-200	1	14	Abraded
	F17A	C49 bowl	c.240-400	5	3	Abraded
	F25	Closed		1	4	Fresh
	MISC			10	16	Abraded
			c.370-420	37	191g	F003. fill of cut 5209
5210	C1E			2	9	Fresh
	C8D	Closed	c.70-250	2	8	Sl abraded
	F1A	Dr33	c.43-110	3	4	Sl abraded
	F25	Beaker	c.70-130	1	2	Fresh
	F13	Closed	c.130-250	1	1	Fresh
	A3	GAUL 4	c.43-250	1	10	Fresh
	MISC			4	6	
			c.70-250	14	40g	F001. fill of cut 5211
5213	C1F	Jar		2	9	Abraded
	F17A		c.240-400	1	1	Abraded
			Residual	3	10g	F004. dark fill of post pipe 5214 in PH 7
5221	F17A	C97 mortarium	c.240-400	1	20g	F010. cut of PH 2
5224	C1P	Jar	c.370-420	1	20	Fresh
	C10A	Storage jar	c.270-400			Fresh
		Cooking-pot	c.270-400	3	70	Fresh
	F17A	Open form	c.240-400	1	25	Fresh
			c.270-420	5	115g	F009. Manganese layer in pit below 5076, 5193, 5089, 5197. above 5212, 5198, 5085
5225	C1E	5C.10 jar	c.270/370-400	6	88	Fresh

	C1D	Str sided dish	c.270-370/400	1	13	Fresh
	C10A	Closed	c.270-400	1	3	Fresh
	C9F	Jar	c.300-400	2	51	Fresh joining
	C11	Rilled jar	c.325-420	1	3	Fresh
	C19	Jar		12	166	Fresh
	F1D			1	1	
	F17A	Beaker	c.240-400			Fresh
		Bowl	c.240-400	3	40	Fresh
	F18A	Beaker	c.260-400	1	7	Spalled
	F20	Bowl	c.350/70-400	1	8	Fresh
	F25	Beaker		1	2	Fresh
	Tile			1	9	
	Fir clay			2	10	
			Dumped after 370	30	382g	F009. Gravel below 5212. above 5226
5226	C1D	Dish		4	26	
	C1E	Herringbone combed jar				Abraded
		Storage jar				Abraded
		Ev rim jar	c.270-400	8	111	Fresh
	C1Q	Storage jar	c.350-400	3	234	Fresh
	C7	hook rim jar	c.300-370	1	31	Fresh
	C10A	Cl 3B jar	c.270-400			Fresh
		Cl 3C jar	c.300-400	14	201	Fresh
	C19	Jar		9	27	
	F1D			1	1	Abraded
	F17A	Bowl	c.240-400	2	12	Fresh
	F24	Rouletted		1	18	Fresh
	F9A	beaker	c.150-350	1	7	Fresh
	F34	4A2 bowl	c.275-375	1	52	V fresh
	A1	Mortarium DR20		1	107	Fresh burnt
			c.300-370+	46	827g	F009. fill in pit below 5225
5228	C1P	Jar	c.370-420	2	74	Abraded
	C8F	Jar base	c.300-400	1	48	Fresh
			Deposited ?after 400	3	122g	F004. Fill of post pipe 5229 in PH 5
5231	C1D			3	32	Abraded
	C1E			1	2	Fresh
	C8A	Jar	c.270-350	1	8	V abraded
	C16			4	10	Abraded
	F11			1	3	Fresh
	MISC			1	3	
			Residual	11	58g	F004. upper fill of post pipe 5232 in PH 13
5234	C8C	Jar		1	7	Abraded
	C8E	Ev rim jar		1	6	Abraded
			Residual	2	13g	F004. fill of post pipe pipe 5232 in PH 13
5238	C3	Open form	c.270-300+	1	4g	F005. fill of PH 5230
5241	C1H/L	Jar	Residual	1	15g	Abraded. F004. fill of post pipe 5242 in PH 6
5243	C1D	Necked jar		2	12	Fresh
	C1P	5F.5 jar	c.370-420	7	100	Fresh
	C8B	Bead-rim jar	???	3	57	Fresh
	F17A		c.240-400	1	6	Sl abraded
	F17D	P24 bowl	c.240-400	1	22	Fresh
	F25	Ev rim jar		1	4	Abraded
	MISC			2	14	Fresh
			c.370+	17	217g	F004. fill of small PH 5244 in top of post pipe in PH 6
5245	C10B	Jar	c.300-400	1	8	Sl abraded
	Tile			1	2	Fresh
			Residual	1	8g	F004. fill of post pipe 5246 in top of PH 4
5247	A1	DR20		2	92g	F004. lower fill of post pipe 5129 below 5128 in PH 7
5248	C10A	Jar	c.270-400	1	2	Fresh
	F17A		c.240-400	1	3	Abraded
				2	5g	F004. lower fill of post pipe in PH 4
5249	C1D	Jars		5	30	Fresh and abr
	C1E	Jars		2	22	Fresh and abr

				7	52g	F004. fill of post pipe in PH 12
5251	C1D	Lid	c.43-200			Fresh
		Bowl		12	131	Fresh
	C1E			3	14	Fresh and abr
	C1F	Jar		2	64	Fresh
	C6	Jar	c.180-300	1	4	Fresh
	C9B	Jar		1	5	Sl abraded
	C9D	Closed	c.70-250	1	4	Sl abraded
	C19	Jar	c.90-175	1	7	Fresh ?Canterbury
	C20	5C bowl	c.150/70-250	1	11	Fresh
	F5	Ev rim beaker	c.70-150	4	22	Fresh 1 beaker
	MISC			3	4	Abraded
			c.180-250	29	266g	F004. top fill of SW half of PH 1
5252	C10A	Closed	c.270-400	1	2	Sl abraded
	F17A	Mortarium	c.240-400	1	2	Sl abraded
			c.270-400	2	4g	F011. post packing of square post hole
5261	C1D			8	79	Abraded
	C1E			11	112	Abraded
	C1 comb	Jar	c.LIA-150	1	15	Abraded
	C5B	Jar				Abraded
		Str-sided dish	c.160-250	14	152	Abraded
	C10A	1C.6 storage jar	c.330-400	1	9	V abraded
	C11	Jar	c.325-420	1	10	Abraded
	C11 Fine	Jar	c.325-400	1	41	Fresh
	F1D	Dr 37 deep	c.170-200	4	80	Abraded and s lab
	F17A		c.240-400	6	20	Fresh and abr
	F18A	Beaker	c.260-400	1	10	Fresh
	F25	Jars		5	46	Fresh
	MISC			6	11	
			Residual	59	585g	F004. top fill of PH 1
5262	C1D			5	49	Fresh
	C1E			5	78	Fresh
	C1F	Str-sided dish	c.160-370	1	8	Fresh
	C1P	Necked jar		2	11	Fresh
	C8B	Jar	c.270-350	2	29	Fresh and sl abr
	C8C	Dish	c.160-270	1	38	Fresh
	C10A	Jar	c.270-400	2	17	
	C19	Poppyhead	c.160-200	1	14	Fresh
	F1D	beaker	c.150-200	3	8	Fresh
	F7	Dr 31	c.50-150	1	3	Fresh
	F11	Beaker	c.160-300	2	16	Sl abraded
	F17A	Closed	c.240-400	1	14	Fresh
	F25	Mortarium		3	34	Fresh
	MISC	Cavetto-rim jar		2	18	
			c.150-400	31	337g	F004. fill of main post pipe in PH 1
5263	C1D	5B.11 dish	c.150-270			Fresh
		Str-sided dish	c.160-370	6	56	Fresh
	C1E			8	101	
	C1L	Ev rim jar		6	63	Fresh and abraded
	C9B	Ev rim jar	c.270-350	4	38	Fresh
	C9C			2	16	Fresh
	C9D	Rouletted	c.190-270	2	8	Fresh
	C9F	beaker	c.300-400	2	19	Fresh
	C16	Hook-rim jar	c.270-330	3	36	Abraded
	C19	Beaded+fl bowl		1	14	Sl abraded
	F1E	Bowl	c.140-260	1	7	Abraded
	F24			1	15	
	MISC			13	51	
			c.300-370	49	424g	F004. 2nd layer down in PH 1
5264	C1D	Jarsx2	c.70-250			Fresh
		Flanged dish	c.150-250	9	144	Fresh
	C1E	Necked jar	c.150-270	6	88	Fresh
	C1F	Jar		1	13	Fresh
	C8D	Poppyhead	c.160-230	1	13	Fresh
	C8C	beaker	c.100-130			Fresh
		Poppyhead	c.150/70-250	7	117	Fresh
	C9D	beaker	c.160-230	5	57	Fresh
	C16	5C bowl		1	10	Fresh
	C19	Poppyhead	c.270-370	2	53	Fresh
	F1D	beaker	c.170-200	3	66	Fresh
	F5		c.50-200	3	31	Fresh

	F12	Hook rim jarx2	c.150-200	2	13	Fresh
	F14	Deep Dr 31	c.200-270	2	2	Fresh
	F24	Necked jar		1	11	Sl abraded
	F25	Beaker		1	4	Fresh
	AX	Beaker		1	18	
	MISC			8	21	
		Closed				
			c.150-270+	53	661g	F004. 3rd layer down in PH 1
5269	C1D	Jar base		1	11	Fresh
	C1E	Jar		5	136	Fresh
	C1F	Jar		1	5	Fresh
	C8C	Jar		1	5	Sl abraded
	C9B	Jar	c.270-350	1	8	Sl abraded
	C10A	Jar	c.270-400	1	2	Sl abraded
	C19	Jar		4	16	Fresh
	C21	Briquetage		1	2	Abraded
	F1D			1	7	Abraded
	F17A	Bowl	c.240-400	1	7	Abraded
	F25			1	4	Abraded
	MX			1	13	Abraded
			c.270+	19	216g	F004.layer below 5264 in PH 1

16.1.3 Catalogue of the pottery from environmental samples by Malcolm Lyne

Context	Fabric	Form	Date-range	No.of sherds	Weight in gm.	Comments
5004 <2>	F18B MISC	Beaker base	c.270-400	1 6	4 6	Abraded abraded
			Late Roman	7	10G	
5009 <2>	MISC		Residual	2	5G	Abraded
5013 <4>	C8D C11 MISC	Rouletted bkr rilled jar	c.190-250 c.330-420	3 1 69	6 7 138	Fresh
			Late 4th c. or later	73	151G	
5017 <1>	MISC		Residual	2	2G	V abraded
5034 <3>	MISC		Residual	3	4G	Abraded
5043 <4>	MISC		Residual	12	23G	Abraded
5053 <5>	C1E C10A MISC		c.270-420 c.200-400	1 3 5	7 5 7	Sl abraded fresh
			Late Roman	9	19G	
5064 <6>	F17A MISC	Bowl	c.240-400	1 16	3 36	
			Late Roman	17	39G	
5068 <38>	MISC		Residual	7	13G	Abraded
5085 <7>	C1A C1D C1E C10A C11 F1A MX MISC	 Str-sided dish rilled jar Wall-sided mort	 c.150-400 c.200-400 c.330-420 c.170-400	10 7 7 4 1 1 1 75	12 51 72 13 6 1 26 185	
			c.330-400	106	366G	
5086 <8>	MISC			4	7G	Abraded
5102 <44>	C1P MISC		c.370-420	1 24	1 37	Fresh Very abraded
			c.370+	25	40G	
5118 <10>	A1B	DR20	c.170-250	1	2	Abraded

	MISC			33	58	abraded
			Residual	34	60G	
5120 <11>	C1 C5B F15 F18D MISC	Bead-rim jar	 c.50-150 c.160-270 c.240-370	4 1 1 1 65	27 3 1 2 198	
				72	231G	
5122 <12>	MISC		Residual	75	67G	Abraded chips
5130 <16>	C10A MISC		c.200-400	1 12	2 23	 Abraded
			c.200-400	13	25G	
5134 <18>	C1P F25 MISC	Str-sided dish	c.350-420	1 7 13	10 15 9	fresh
				21	34g	
5136 <19>	F18B MISC	Beaker	c.270-400	2 19	11 27	
			Late Roman	21	38g	
5140 <21>	MISC		Residual	30	28G	V abraded
5142 <22>	MISC		Residual	12	27G	Abraded
5144 <23>	C8C F1D F18D MISC	Jar beaker	 c.250-370	1 1 2 82	9 2 4 103	
				86	118G	
5148 <24>	MISC			9	16G	
5152 <30>	MISC		Residual	48	37G	V abraded
5159 <28>	C1E C1P MISC	Ev rim jar	c.300-400 c.350-400	2 1 19	11 14 38	
			c.300-400	22	63G	
5167 <41>	MISC		Residual	80	76G	VAbraded
5168 <38>	MISC		Residual	137	216G	Abraded
5187 <33>	MISC		Residual	36	57G	v.abraded
5194 <25>	MISC		Residual	7	15G	abraded
5195 <26>	MISC		Residual	28	80G	Abraded,
5197 <27>	C1E C1P C8C C10A F9A F17A MISC	Jars ev rim jarsx2 ev rim jar convex-sided d bead rim beaker beaker	 c.350-420 c.250-370 c.330-420 c.230-300+ c.240-400	2 3 4 3 1 2 65	13 63 40 16 6 5 142	
			c.250-420	80	285G	
5198 <44>	C1P F9A F18B MISC	Jar rouletted beaker indented beaker	c.350-420 c.230-300+ c.270-400	5 1 1 62	12 2 2 97	
			c.350-400+	69	113G	
5201 <32>	C8C MISC		c.250-370	1 61	4 99	Abraded abraded
			residual	62	103g	

5212 <29>	C1D C1E C8B C8D C10A F14 F17A F18A MISC	Ev.rim jar ev rim jar beaker bowl beaker 	c.200-400 c.200-400 c.250-370 c.200-400 c.200-275 c.270-400 c.240-400 	9 5 1 4 2 2 2 1 109	64 57 1 23 36 1 9 1 226	
			c.270-400	135	424G	
5213 <31>	C1F C8D MISC			1 1 11	2 1 12	
				13	15G	
5215 <34>	C1D MISC	Jar		1 2	13 1	Fresh
				3	14G	
5216 <35>	F17A MISC		c.240-400	1 9	2 23	Abraded v abraded
			Residual	10	25g	
5217 <36>	C1E F18B	 Flagon neck	 c.270-400	1 1	6 5	 Abraded
				2	11G	
5223 <37>	MISC		Residual	16	17G	V abraded
5225 <50>	C1P C8F F18A MISC	 Jar beaker 	c.350-420 c.240/70-400 	1 1 1 229	6 5 1 506	
			c.240/70-420	232	518G	
5226 <40>	C1D C1F C8D C10A F17A F18A F19A MISC	Dish Jar jar beaker indented beaker beaded+fl bowl 	 c.200-400 c.240-400 c.240/70-400 c.270-400 	2 1 1 1 1 2 1 184	5 5 1 1 2 6 5 299	
			c.240-400	193	324G	
5241 <48>	MISC			41	48G	
5243 <47>	C10A	Closed	c.200-400	1	2G	
5245 <42>	C8B C8C MISC	Closed closed 	c.250-370 	1 1 25	3 2 119	
				27	124G	
5247 <43>	C10A	Dish	c.200-300	1	3G	
5248 <49>	C1D C1E MISC	Jar ev rim jar 	 c.200-400 	1 1 9	7 4 30	
				11	41G	
5249 <43>	C1D MISC			1 7	2 4	 V abraded
				8	6G	
5261 <53>	MISC		Residual	51	66G	Abraded
5262 <52>	C10 C20 MISC	Bead rim jar ev rim jar 	c.70-150 c.170-250 	1 1 180	37 14 275	

				182	326G	
5263 <54>	MISC			17	21G	
5264 <?>	C8D MISC	Closed		1 52	1 218	Abraded
			Residual	53	219G	
49 samples				2204	4572G	

16.1.4 Catalogue of the BRF14 pottery from CBM assemblage (Oct 2019)

Assemblage identified by Luke Barber; not assessed by Malcolm Lyne in his original report.

Amphora

Context no.	No. pieces	Weight	Comments
5000	7	311.48	
5003	2	58.84	
5013	5	209.63	
5021	1	112.30	
5051	1	9.06	
5057	1	248.00	metal attachd?
5063	1	41.18	
5076	1	15.55	
5100	1	75.99	
5111	1	27.50	
5159	2	42.52	
5208	2	92.10	
5226	1	56.27	
5243	1	35.31	
5261	1	10.80	
Total	**28**	**1346.53**	

Pottery

Context no.	No. pieces	Weight	Comments
5000	16	113.73	
5001	2	2.18	
5003	1	12.08	
5004	23	135.72	
5006	2	7.69	
5009	6	15.57	
5013	4	15.53	
5020	1	15.33	
5053	2	6.81	<5>
5053	2	4.46	
5059	1	4.28	
5063	4	23.81	
5085	2	6.63	
5100	4	229.11	incl SF:5.64
5105	5	13.36	
5107	2	17.34	
5111	7	46.47	
5116	4	19.46	
5122	1	2.58	<12>
5128	3	18.35	
5142	1	1.81	<22>
5159	2	13.22	
5162	1	635.00	incl SF:5.28
5195	8	12.52	<26>
5197	2	4.01	<27>
5201	2	5.61	<32>
5206	5	12.31	
5212	6	15.88	<29>
5225	5	16.79	<50>
5226	13	23.36	<40>
5245	5	13.37	<42>
5251	5	26.14	
5252	1	3.96	<52>
5254	1	0.88	
Total	**149**	**1495.35**	

16.2.1: An assessment of the ceramic building material by Luke Barber

Introduction

The excavations recovered 1435 pieces of ceramic building material, weighing 42,815g, from 100 individually numbered contexts. These totals include 311 pieces, weighing 1899g, recovered from 27 environmental residues. Most deposits produced some ceramic building material in small to medium quantities – the largest context group consisting of 294 pieces (12,430g) from general cleaning [5000]. Most deposits, whether pit, post-holes or ditches contained well under these quantities, typically between 10 and 30 pieces. The condition of the assemblage is poor – the material is notably fragmented and most shows notable signs of abrasion. The pieces are often too small to be diagnostic of form. The abrasion on these suggests most have been re-used and/or reworked.

The assemblage has been fully listed for each context on pro forma for the archive during the assessment. The site fabric series established for the 2013 assemblage has been re-used and extended for the current assemblage. All tile diagnostic of form was recorded by fabric and form, however, pieces too small to discern form were just counted and weighed as miscellaneous. Key pieces and fabric samples have been retained for long-term curation and reference during future ceramic building recording at the site. The archive data has also been entered into an excel spreadsheet as part of the assessment.

The Assemblage

Nearly the whole assemblage is of Roman date, being recovered from a number of contexts spanning the 2nd to 4th centuries (phases 4 to 6). However, there is also a very small quantity of post-medieval material from unstratified/topsoil deposits. The two assemblages are considered separately here.

Romano-British

The vast majority of the assemblage is of this period (1427 pieces weighing 42,343g). Even when these pieces are too small to be certain of form they are in definite Roman fabrics, though a few pieces are too small to be absolutely certain of this. Seventeen Roman 'fabrics' were identified during the 2013 work covering tile and 'burnt clay'. Despite being considerably smaller than the 2013 assemblage the diversity of fabrics in the current assemblage is much greater. Only two of the 2013 fabrics are not present in the 2014 assemblage, however, 10 new fabrics were recognised in the 2014 assemblage. The whole fabric series is summarised in Table 1.

Fabric	Description	Comments	No/weight
RB1	Sparse sand, moderate/abundant iron oxides to 1mm with occasional rare flint to 0.5mm and marl	Usually a well fired fabric	70/7298g
RB1/3	Rare fine sand/silty fabric with moderate/abundant marl streaks and common/moderate iron oxides to 1mm	A cross between RB1, RB3 and RB9	58/5210g
*RB 1/4	Moderate medium clear quartz with black iron oxide streaking	Medium/well fired	6/902g
*RB 1/7	Moderate-common medium clear quartz with sparse iron oxides to 1mm	Medium/well fired	20/2088g
RB2	Sparse sand, rare/common iron oxides to 1mm. occasionally very rare flint/marl to 0.5mm	A finer version of RB1	39/3552g
*RB2b	Very fine/untampered fabric with no visible inclusions	Well/hard fired	1/292g
RB3	Silty fabric with rare/common marl streaks and rare/sparse iron oxides to 0.5mm	Well fired	29/1992g

Fabric	Description	Comments	No/weight
*RB3b	Moderate to common 'marl' pellets to 2mm, rare/sparse clear quartz and moderate red/orange iron oxides to 2mm	Well fired	4/324g
RB3/4	Silty fabric with common/abundant black iron streaks/patches and common/abundant marl streaks and patches	A transitional RB3/4 fabric	6/322g
*RB3b/4	Moderate to common 'marl'/clay pellets to 2mm with black iron oxide streaks	Very crude lumpy fabric. Low/medium fired. Period uncertain	18/304g
RB4	Silty fabric with common black iron streaks/patches and rare iron oxide and marl to 0.25mm	Usually low-fired	12/1246g
RB5	Silty burnt clay with rare/moderate iron oxides to 0.5mm	Burnt clay/daub – usually amorphous	7/30g
RB6	Silty burnt clay with grey unburnt silty seams.	Low fired local alluvium	499/2638g
RB7	Sillty fabric with rare fine sand and very occasional calcareous pieces to 1mm	A notably 'clean' fabric	8/756g
RB8	Silty burnt clay with common/moderate grass tempering	Burnt clay/daub	0
RB9	Silty fabric with moderate/abundant iron oxides to 1mm and marl streaks/pellets to 3mm	A coarser version of RB3	9/940g
RB10	Abundant fine sandy clay with rare iron oxides to 0.25mm	Hearth lining – usually vitrified	0
RB11	Sparse sand tempered with moderate iron oxides to 1mm and common flint grits to 1mm	Flint throughout fabric	9/1882g
*RB11b	Moderate to common white (?calcined) flint grits to 2mm	Low-fired, lumpy	4/42g
*RB11c	Sparse fine/medium quartz, sparse white flint to 1mm, sparse iron oxides and 'marl' pellets to 1mm	Medium fired	1/252g
RB12	Silty fabric with common/moderate sub-rounded red and grey flint grits	A briquetage fabric	3/5g
RB13	Pale buff marl-rich silty clay with common red (iron) mottling	Burnt clay/hearth lining	5/602g
RB14	Dark blue grey very hard fired 'fabric' tempered with sand and rare iron oxides to 0.mm	Overfired wasters and kiln debris	3/21g
RB15	Common to moderate medium sand	Distinctly sandy throughout	22/2768g
*RB15b	Common fine 'sugary' quartz, sparse 'marl' and iron oxides	Medium/well fired	5/490g
*RB15c	Sparse/moderate white medium quartz, sparse iron oxides and 'marl'	Medium fired	6/516g
*RB16a	Sparse/moderate calcareous peppering to 1mm, sparse medium quartz	Well to hard fired	1/42g

Table 1: Roman Ceramic Building Material fabrics (* new fabric in 2014) with quantification of 2014 assemblage. Types with 0 in quantification only found in the 2013 excavations. Only includes pieces recorded to fabric level

Virtually the entire Roman assemblage was recovered from unstratified of Late Roman (phase 6) deposits. As such the relative lack of early contexts gives the assemblage little chronological range that may have helped define the date range of certain fabrics. This was also noted, albeit on a lesser scale, in the 2013

assemblage where most of the fabrics were in evidence during the Early Roman period – the degree to which they continued in production and/or were re-used in the Late Roman period being impossible to ascertain. The high accidental residuality rate in the Late Roman period adds to the problem. To what extent the 10 new fabrics represent Late Roman types is uncertain due to the few Early Roman deposits at this point. Only one of the new fabrics (R11c) was recovered from phase 4/5 but the quantities involved are too small to draw firm conclusions from: phase 4 and 5 deposits produced a mere 120 pieces (1617g). However, these early deposits produced a full range of forms, including brick, daub, all roof tile types and box flue. Fabrics in phases 4/5 consist of RB1, RB3, RB6, RB11, RB11c, RB12 and RB15.

The wide range of fabrics present suggest either more than one workshop was producing the material and/or the material covers a significant chronological span. A number of the fabric variations use similar tempering and could quite easily originate from the same workshop and indeed the suite of inclusions would have been easily available to the Bridge Farm settlement. It is quite probable that some of this material was made on site, perhaps over a period of time. However, the assemblage may also include demolition material from buildings on or off the settlement site.

A range of typical Roman ceramic building material forms are present within the assemblage and the quantities of these, by fabric, are shown in Table 2.

Fabric/ Form	Brick	Tegula	?Tegula	Imbrex	Box Flue	Other	Misc (not diagnostic)
RB1	27/4840g	10/770g	17/702g	5/290g	10/676g	-	1/20g
RB1/3	20/3032g	5/536g	25/1044 g	4/418g	4/180g	-	-
RB1/4	3/314g	1/296g	1/112g	-	1/180g	-	-
RB1/7	12/1456g	-	3/188g	2/172g	3/272g	-	-
RB2	16/1994g	5/594g	9/474g	6/342g	3/148g	-	-
RB2b	1/292g	-	-	-	-	-	-
RB3	8/772g	2/128g	14/634g	1/30g	4/428g	-	-
RB3/4	2/148g	2/90g	2/84g	-	-	-	-
RB3b	2/176g	2/148g	-	-	-	-	-
RB3b/4	-	-	-	-	-	Slab 7/50g	11/254g
RB4	6/968g	1/56g	2/134g	1/20g	2/68g	-	-
RB5	-	-	-	-	-	Daub 7/30g	-
RB6	-	-	-	-	-	Daub 499/2638g	-
RB7	1/68g	1/198g	5/466g	-	1/24g	-	-
RB9	3/628g	1/58g	4/214g	-	1/40g	-	-
RB11	6/1810g	-	2/22g	-	1/50g	-	-
RB11b	-	-	-	-	-	-	4/42g
RB11c	1/252g	-	-	-	-	-	-
RB12	-	-	-	--	-	Briquetage 3/5g	-
RB13	-	-	-	-	-	Daub 5/602g	
RB14	-	-	-	-	-	-	3/21g
RB15	9/1512g	-	2/126g	5/370g	6/760g	-	-
RB15b	1/134g	1/50g	1/96g-	1/136g	1/74g-	-	-
RB15c	2/154g	-	1/56g	-	3/306g	-	-
RB16a	-	-	1/42g	-	-	-	-
Totals	123/18,944	31/2924	89/4394	25/1778	40/3206	543/3545	19/337

Table 2: Breakdown of Roman CBM forms by fabric

Brick fragments are the most common type. This is frequently seen in re-used assemblages as the brick fragment provide the easiest material for re-use in walls and post-packing. The brick fragments all fit within a 29 to 52mm thickness range. There are a number of over-fired examples in this group, some with surface vitrification but no definite wasters are present. Markings are rare but include three examples with a U-shaped batch-mark and one with a criss-cross mark (ditch [5104], F3 ditch, phase 6c). Another example has a finger imprint as well as a textile imprint (fill [5085] in F9 sump/well, phase 6c).

Tegula tile fragments (as well as probable fragments thereof) are also common in the assemblage and range between 14 and 28mm thick. As noted for the brick, there are a number of over-fired examples in the assemblage and at least one probable waster (a misformed example in R1 from post-hole [5135] of the F4 building. Some 16 examples of flanges are present though a number do not have their full profiles surviving. The complete flanges are of similar types to those seen in 2013: mainly of upright squared type though some have chamfered internal edges. There is no patterning between the form of flange and fabric type. Considering the size of the assemblage there is not a great variation in form though flange heights (from the base of the tile) range between 32 and 50mm. Several flanges have either the upper or lower cutaway, the latter always being the simple chamfered type. Unlike the 2013 assemblage a couple of the current tiles do carry batch marks - single arced line (pit in NW baulk, fill [5111]) and a triple arced mark from cleaning layer [5000] (both fabric R1).

The fragments of imbrex tile range greatly in thickness from 11 to 19mm, but these tiles are notorious for their variable thicknesses depending on which part of the tile is measured. As with other types, there is a range of firing represented, including a few very overfired examples.

The presence of significant quantities of box flue tile fragments is quite notable, particularly in the absence of a building with heating system within the trenches. This phenomenon was also apparent in the 2013 assemblage. Whether one or more heated buildings were situated within the settlement (most likely baths) remains to be seen. However, the box flue could also derive as wasters from on-site production (some are overfired) and/or as material imported from other sources as general hardcore and building material. Thicknesses are as variable as noted for the imbex tiles: 13-24mms. Most pieces have been combed with three, four, five or six-toothed combs. The combing is typically vertical/parallel and in V-patterns, though criss-cross and wavy patterns are also present.

There is a notable quantity of burnt clay pieces. These are usually amorphous in form but a few have flattened faces and a piece from post-pipe [5201] in post-hole 08 of the F4 building has a *c.* 15mm diameter wattle impression. As such this material could be oven/hearth lining or daub. It was found in most contexts with 32 amorphous pieces (77g) coming from the F7 forging hearth.

Other forms of note include the three small pieces of briquetage from pit fill [5111] (pit NW baulk) and post-hole fill [5251] (F4 building). These, added to the single piece in the 2013 assemblage hint at some contact with salt-production, probably in the lower Ouse valley.

Post-Roman

The assemblage includes just seven pieces (472g) of definite post-Roman ceramic building material, all derived from cleaning layer [5000]. Three fabrics were identified in the 2013 assemblage, with the new pieces adding three more (Table 3). The pieces consist of a single brick and peg, peg/nib and ridge tile fragments of 18th- to 20th- century date range. These almost certainly were spread on the fields during post-medieval manuring.

Fabric	Description	Comments	No/weight
PM1	Sparse very fine quartz sand with rare/common calcareous inclusions	Quite well made and fired peg tile. Probably C17th to mid 18th	0

PM2	Sparse fine sand with rare iron oxide inclusions to 0.25mm and occasional marl streaks	Quite well made and fired peg tile. Probably C18th to 19th	0
*PM2b	Fine matrix with common iron oxides to 1mm	Well formed and fired peg tile. C18th-19th	3/54g
*PM2c	Fine, slightly granular fabric with spars white inclusions to 1mm	Machine-made roof tile. Hard-fired. C20th	1/24g
PM3	Silty fabric with rare/common iron oxides to 3mm and flint to 1mm	Quite crudely formed and low/medium fired brick. Probably C17th – 18th .	0
*PM4a	Slightly fine matrix though granular texture	Well formed, hard fired red brick. Late C19th – 20th	3/394g

Table 3: Post-Roman Ceramic Building Material fabrics (* new fabric in 2014). Types with 0 in quantification only found in the 2013 excavations.

Potential

The post-Roman ceramic building material assemblage is small, late and from unstratified deposits. As such it is not considered to hold any potential for further analysis.

The Roman assemblage is of more interest as it directly relates to the main phases of activity at the site. However, the assemblage consists of generally small and abraded pieces that have clearly been reworked. Where diagnostic of form the full general range of types is present in a wide range of fabrics. The current assemblage does not have the stratigraphic or artefactual refinement to allow closer dating of the fabrics and forms, particularly considering the certain degree of re-use and reworking. The brick and tile is present in this fabric and form jumble in all feature groups. The fact that the F4 building clearly did not have a hypocaust, yet box flue tile fragments abound within its post-holes and surrounding features, demonstrates the brick and tile probably does not relate to the building's structure at all. This is confirmed by the absence of any large pieces from its area. The brick and tile associated with the F4 building totals 314 pieces (6879g) which was recovered from fifteen associated post-holes (mainly from the constructional backfills). This group includes brick, tegula, imbrex and box flue tile fragments in a wide range of fabrics. As such the assemblage simply relates to some (possible) post-packing or, more likely, just a dense background scatter of general metalling from yards and tracks within the settlement. As such the assemblage is not considered to hold any potential for further detailed analysis on its own merits. However, the data from the assemblage ought to be reconsidered and included in any future publication that aims to draw together all of the excavations at the site.

16.2.2: Catalogue of the ceramic building material by Luke Barber

Cntxt /Δ No	Parent	Feature /group	Date	Phs	Fabric	Type	No	Wt gms	Thck mm	Flange type & ht Comments
5000	cleaning	n/a	u/s	n/a	Misc	?	50	1190	?	
5000	cleaning	n/a	u/s	n/a	Misc	?	50	496	?	
5000	cleaning	n/a	u/s	n/a	Misc	?	34	144	?	
5000	cleaning	n/a	u/s	n/a	F11b	?	3	32	15	
5000	cleaning	n/a	u/s	n/a	Misc	Daub	15	126	n/a	
5000	cleaning	n/a	u/s	n/a	F1	?Teg	6	198	19-26	
5000	cleaning	n/a	u/s	n/a	F9	?Teg	2	78	23-25	
5000	cleaning	n/a	u/s	n/a	F2	?Teg	1	50	23	
5000	cleaning	n/a	u/s	n/a	F3	?Teg	3	134	18-24	
5000	cleaning	n/a	u/s	n/a	F1/3	?Teg	7	220	20-25	
5000	cleaning	n/a	u/s	n/a	F3/4	?Teg	1	16	18	
5000	cleaning	n/a	u/s	n/a	F4	?Teg	1	50	16	
5000	cleaning	n/a	u/s	n/a	F7	?Teg	2	42	18-20	
5000	cleaning	n/a	u/s	n/a	F15	?Teg	1	38	16	
5000	cleaning	n/a	u/s	n/a	F1/7	?Teg	2	58	15 & 27	
5000	cleaning	n/a	u/s	n/a	F1	Teg	1	42	22	Type1a: 45mm
5000	cleaning	n/a	u/s	n/a	F1	Teg	3	206	22	x1 triple arced batch mark
5000	cleaning	n/a	u/s	n/a	F9	Teg	1	58	22	
5000	cleaning	n/a	u/s	n/a	F2	Teg	1	80	19	Type 2a: 38mm
5000	cleaning	n/a	u/s	n/a	F2	Teg	1	10	?	
5000	cleaning	n/a	u/s	n/a	F1/3	Teg	1	10	?	
5000	cleaning	n/a	u/s	n/a	F1	Imb	2	144	15 & 17	x1 overfired
5000	cleaning	n/a	u/s	n/a	F2	Imb	1	50	17	
5000	cleaning	n/a	u/s	n/a	F1/3	Imb	2	288	20	
5000	cleaning	n/a	u/s	n/a	F4	Imb	1	20	20	
5000	cleaning	n/a	u/s	n/a	F15	Imb	1	186	18	well/over-fired
5000	cleaning	n/a	u/s	n/a	F1/7	Imb	1	152	18	
5000	cleaning	n/a	u/s	n/a	F15b	Imb	1	136	20	Common fine quartz
5000	cleaning	n/a	u/s	n/a	F1	Box	5	348	17-20	3 straight comb, 2 wavy comb incl x6 toothed with cutaway. **Retained**
5000	cleaning	n/a	u/s	n/a	F1/3	Box	1	38	18	Overfired - criss-cross combing (4-toothed)
5000	cleaning	n/a	u/s	n/a	F4	Box	1	46	20	
5000	cleaning	n/a	u/s	n/a	F1/7	Box	1	64	18	5-toothed comb - straight
5000	cleaning	n/a	u/s	n/a	F1	Brick	6	1216	32-38	
5000	cleaning	n/a	u/s	n/a	F1	Brick	1	318	48	Overfired
5000	cleaning	n/a	u/s	n/a	F9	Brick	3	628	32-33	
5000	cleaning	n/a	u/s	n/a	F2	Brick	8	514	33-40	
5000	cleaning	n/a	u/s	n/a	F3	Brick	1	90	35+	
5000	cleaning	n/a	u/s	n/a	F1/3	Brick	7	604	30-38	

Cntxt /Δ No	Parent	Feature /group	Date	Phs	Fabric	Type	No	Wt gms	Thck mm	Flange type & ht Comments
5000	cleaning	n/a	u/s	n/a	F4	Brick	2	140	38	
5000	cleaning	n/a	u/s	n/a	F15	Brick	4	434	29-33	
5000	cleaning	n/a	u/s	n/a	F7	Brick	1	68	37	
5000	cleaning	n/a	u/s	n/a	F1/7	Brick	7	836	28-33	
5000	cleaning	n/a	u/s	n/a	F11	Brick	2	1520	30 & 55	Thick eg. Rough and reduced/hard fired.
5000	cleaning	n/a	u/s	n/a	F15c	Brick	1	54	37	
5000	cleaning	n/a	u/s	n/a	F3b	Brick	1	122	36	
5000	cleaning	n/a	u/s	n/a	F3	Brick	1	282	40	x2 finger marks & arced batch mark. **Retained**
5000	cleaning	n/a	u/s	n/a	PM4a	Brick	3	394	?	Machine made
5000	cleaning	n/a	u/s	n/a	PM2b	Peg	1	14	12	
5000	cleaning	n/a	u/s	n/a	PM2c	?Nib/ peg	1	24	10	Machine made
5000	cleaning	n/a	u/s	n/a	F15	Box	1	44	13	
5000	cleaning	n/a	u/s	n/a	Misc	?	37	284	?	
5000	cleaning	n/a	u/s	n/a	F3b	Brick	1	54	34	
5000	cleaning	n/a	u/s	n/a	PM2b	Ridge	2	40	13	
5001	cleaning	F1 centre ditch	100-400	n/a	Misc	?	23	62	?	Amorphous
5001	cleaning	F1 centre ditch	100-400	n/a	Misc	Daub	7	94	n/a	Most F6 - amorphpous
5003	PH13 5233	F4 buildng	250-375	6	F11	Brick	1	74	45+	
5003	PH13 5233	F4 building	250-375	6	F15	Box	1	240	18	5-toothed combe criss cross. **Retained**
5003	PH13 5233	F4 building	250-375	6	F15	Imb	1	46	20	
5003	PH13 5233	F4 building	250-375	6	F1	?Teg	1	58	16	
5003	PH13 5233	F4 building	250-375	6	F9	?Teg	1	44	25	
5003	PH13 5233	F4 building	250-375	6	F2	?Teg	1	36	25	
5003	PH13 5233	F4 building	250-375	6	Misc	?	3	36	?	
5004	Hearth 5038	F7 forging	350-425	6C	F11	Brick	1	52	30+	
5004	Hearth 5038	F7 forging	350-425	6C	F2	Imb	1	34	16	
5004	Hearth 5038	F7 forging	350-425	6C	F1	Teg	1	186	26	
5004	Hearth 5038	F7 forging	350-425	6C	F1	Box	1	28	22	3-tooth combing straight x1 circular cutaway?
5004	Hearth 5038	F7 forging	350-425	6C	F1/3	?Teg	3	182	16-18	x2 overfired
5004	Hearth 5038	F7 forging	350-425	6C	Misc	?	11	130	?	
5004	Hearth 5038	F7 forging	350-425	6C	F5	Daub	7	30	n/a	Amorphous
5006	Ditch 5007	F1 centre ditch	70-200	4	F1	Box	1	36	24	x3 combed lines straight

Cntxt /Δ No	Parent	Feature /group	Date	Phs	Fabric	Type	No	Wt gms	Thck mm	Flange type & ht Comments
5006	Ditch 5007	F1 centre ditch	70-200	4	F15	Imb	2	114	18-19	
5006	Ditch 5007	F1 centre ditch	70-200	4	Misc	?	2	12	?	Amorphous
5006	Ditch 5007	F1 centre ditch	70-200	4	F6	Daub	17	186	n/a	Amorphous
5009	Ditch 5010	F3 ditch W corner	270-410	6c	F1	Brick	2	458	30 & 30+	x1 hard/over-fired
5009	Ditch 5010	F3 ditch W corner	270-410	6c	F4	Brick	1	110	40+	Rounded edge
5009	Ditch 5010	F3 ditch W corner	270-410	6c	Misc	?	4	88	?	Amorphous
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F6	Daub	28	222	n/a	Amorphous
5013	Ditch 5014	F3 ditch W corner	375-425	6c	Misc	?	61	1152	?	Amorphous
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F15	Brick	1	202	37	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F15	Brick	1	546	52	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F1/3	Brick	3	296	42-45	Pale faces, reduced core
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F3/4	Brick	1	126	40	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F4	Brick	1	188	48+	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F11	Brick	1	80	34+	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F1	Box	1	18	22	x2 combed lines straight
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F15b	Box	1	74	20	x4 combed lines straight
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F15c	Box	1	58	16	x4 combed lines straight
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F1/3	Box	1	18	21	x3 combed lines straight
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F3	Teg	1	52	17	Type 3a: 32mm
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F1/3	Teg	1	22	?	Type 3b
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F3/4	Teg	1	60	17	Type 1b: 38mm
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F7	Teg	1	198	22	Underside cutaway. Type 3b 42mm. **Retained**
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F1/4	Teg	1	296	20	Type 1c: 49mm
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F1/3	Imb	1	82	20	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F1	?Teg	4	160	22-27	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F2	?Teg	1	58	20	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F3	?Teg	2	86	18	

Cntxt /Δ No	Parent	Feature /group	Date	Phs	Fabric	Type	No	Wt gms	Thck mm	Flange type & ht Comments
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F1/3	?Teg	5	280	19-24	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F7	?Teg	1	88	23	Overfired
5013	Ditch 5014	F3 ditch W corner	375-425	6c	F1/4	?Teg	1	112	23	
5013 Δ4	Ditch 5014	F3 ditch W corner	375-425	6c	Misc	?	18	28	?	Amorphous
5015	Ditch 5014	F3 ditch W corner	375-425	6c	F1	?	1	20	18	
5015	Ditch 5014	F3 ditch W corner	375-425	6c	Misc	?	4	32	?	Amorphous
5017	Hearth 5173	F2 banjo hearth	150-250	5	F6	Daub	6	16	n/a	Amorphous
5017 Δ1	Hearth 5173	F2 banjo hearth	150-250	5	F6	Daub	34	94	n/a	Amorphous
5018	Ditch 5019	F3 ditch W corner	350-420	6c	F1/3	?Teg	1	46	28	
5018	Ditch 5019	F3 ditch W corner	350-420	6c	F1/7	Brick	1	102	34	
5018	Ditch 5019	F3 ditch W corner	350-420	6c	F7	?Teg	1	58	25	
5018	Ditch 5019	F3 ditch W corner	350-420	6c	Misc	?	16	326	?	Amorphous
5020	Ditch 5021	F3 ditch W corner	200-410	6	F2	Imb	1	140	20	Hard fired/overfired
5020	Ditch 5021	F3 ditch W corner	200-410	6	F2	Brick	1	312	36	
5020	Ditch 5021	F3 ditch W corner	200-410	6	Misc	?	10	92	?	Amorphous
5021	Ditch 5021	F3 ditch W corner	200-410	6	F3	Brick	1	80	35+	
5021	Ditch 5021	F3 ditch W corner	200-410	6	F1/3	Brick	1	30	30	
5021	Ditch 5021	F3 ditch W corner	200-410	6	Misc	?	7	136	?	Amorphous
5022	PH 5023	G1	270-400	6	F1/3	Brick	1	266	30	
5022	PH 5023	G1	270-400	6	F6	Daub	14	76	n/a	Amorphous
5026	PH 5027	south of F7	270-400	6	F4	Box	1	22	12+	x2 combed lines - straight
5026	PH 5027	ssouth of F7	270-400	6	Misc	?	1	10	?	Amorphous
5030	Ditch 5031	F3 ditch W corner	370-420	6c	F1	Brick	1	84	33	
5030	Ditch 5031	F3 ditch W corner	370-420	6c	F2	Teg	1	114	20	Type 3b: 40mm
5030	Ditch 5031	F3 ditch W corner	370-420	6c	F15	Imb	1	24	15	
5030	Ditch 5031	F3 ditch W corner	370-420	6c	F3	?Teg	1	32	17	
5030	Ditch 5031	F3 ditch W corner	370-420	6c	F15c	?Teg	1	56	22	Grey - could be amph

Cntxt /Δ No	Parent	Feature /group	Date	Phs	Fabric	Type	No	Wt gms	Thck mm	Flange type & ht Comments
5030	Ditch 5031	F3 ditch W corner	370-420	6c	F3b/4	?	1	60	17	
5030	Ditch 5031	F3 ditch W corner	370-420	6c	Misc	?	9	150	?	Amorphous
5037	PH 5146	n/a	Res	n/a	F1	Brick	1	132	38	Hard/overfired. Reduced
5037	PH 5146	n/a	Res	n/a	Misc	?	1	6	?	Amorphous
5045	Ditch 5046	F6 ditch W corner	n/a	n/a	Misc	?	5	54	?	Amorphous
5051	PH 5052	G3 W corner	200-300	5	Misc	?	1	3	?	Amorphous
5051	PH 5052	G3 W corner	200-300	5	F6	Daub	2	2	n/a	Amorphous
5053	Hearth 5054	F7 forging	325-420	6c	F3/4	Teg	1	30	?	Type 1d
5053	Hearth 5054	F7 forging	325-420	6c	Misc	?	11	176	?	Amorphous
5053	Hearth 5054	F7 forging	325-420	6c	F6	Daub	1	3	n/a	Amorphous
5053	Hearth 5054	F7 forging	325-420	6c	F6	Daub	24	44	n/a	Amorphous
5057	Well 5058	F9 well	350-410	6c	F1/3	Teg	1	26	?	Type 2a
5057	Well 5058	F9 well	350-410	6c	F1/7	Imb	1	20	15	
5057	Well 5058	F9 well	350-410	6c	F2	Box	1	86	17	6-toothed combed criss cross
5057	Well 5058	F9 well	350-410	6c	Misc	?	7	42	?	Amorphous
5059	PH 5060	G3 W corner	Res	n/a	F15	Brick	1	174	40	
5061	PH 5062	G3 W corner	Res	n/a	F2	?Teg	1	10	15	
5063	Well 5056	F9 well	350-410	6c	F1/3	?Teg	1	12	19	
5063	Well 5056	F9 well	350-410	6c	F3b/4	?	1	12	13	
5063	Well 5056	F9 well	350-410	6c	Misc	?	5	48	?	Amorphous
5063	Well 5056	F9 well	350-410	6c	F6	Daub	1	8	n/a	Amorphous
5064 Δ6	Hearth 5173	F2 banjo hearth	70-150	4	F6	Daub	10	30	n/a	Amorphous
5064 Δ6	Hearth 5173	F2 banjo hearth	70-150	4	Misc	?	1	6	?	Amorphous
5067	Well 5058	F9 well	350-410	6c	F1/3	Box	1	18	?	three straight lines
5067	Well 5058	F9 well	350-410	6c	F1	?Teg	1	18	24	
5067	Well 5058	F9 well	350-410	6c	Misc	?	7	168	?	Amorphous
5068	Ditch/pit 5069	G3 W corner	100-200	5	F11	?Teg	1	12	26	
5068	Ditch/pit 5069	G3 W corner	100-200	5	F15	Brick	1	42	34	

Cntxt /Δ No	Parent	Feature /group	Date	Phs	Fabric	Type	No	Wt gms	Thck mm	Flange type & ht Comments
5076	Well 5056	F9 well	300-400	6c	F3b/4	?	1	6	16	
5076	Well 5056	F9 well	300-400	6c	F1/7	Brick	1	34	35	
5076	Well 5056	F9 well	300-400	6c	F4	?Teg	1	84	22	
5085	Well 5058	F9 well	350+	6c	F6	Daub	3	246	n/a	Curved face
5085	Well 5058	F9 well	350+	6c	F2	Brick	1	86	30	Overfired/ reduced
5085	Well 5058	F9 well	350+	6c	F1/3	Brick	1	1002	39	Finger imprint textile imprint and arched batch mark. **Retained**
5085 Δ7	Well 5058	F9 well	350+	6c	F6	Daub	5	48	n/a	Amorphous
5085 Δ7	Well 5058	F9 well	350+	6c	F15	?Teg	1	88	19	
5086 Δ8	Ditch 5087/5101	F1 centre ditch	70-200	4	F6	Daub	2	3	n/a	Amorphous
5088	PH (unnumbered)	n corner			F4	Brick	1	294	40	
5088	PH (unnumbered)	n corner			Misc	?	2	26	?	Amorphous
5090	Cut 5091	?	70-250	5	Misc	?	1	20	?	Amorphous
5094	Pit 5095	F10 lg pit	370+	6c	F6	Daub	9	48	n/a	Amorphous
5100	ditch 5104	F3 ditch W corner	350-420	6c	F3b/4	?	4	102	12	
5100	ditch 5104	F3 ditch W corner	350-420	6c	F15b	Teg	1	50	24	?
5100	ditch 5104	F3 ditch W corner	350-420	6c	F1/7	Box	2	208	20-22	x1 6-toothed comb straight, x1 3-toothed oblique and x15-toothed comb criss cross on adjacent surfaces. **Retained**
5100	ditch 5104	F3 ditch W corner	350-420	6c	F2	Imb	1	88	11	
5100	ditch 5104	F3 ditch W corner	350-420	6c	Misc	?	13	342	?	No full dimensions
5100	ditch 5104	F3 ditch W corner	350-420	6c	F1	?Teg	1	30	19	
5100	ditch 5104	F3 ditch W corner	350-420	6c	F1/3	?Teg	2	30	17-20	
5100	ditch 5104	F3 ditch W corner	350-420	6c	F7	?Teg	1	278	22	Worn
5100	ditch 5104	F3 ditch W corner	350-420	6c	F1	Brick	1	86	34+	
5100	ditch 5104	F3 ditch W corner	350-420	6c	F1/3	Brick	1	146	45	

Cntxt /Δ No	Parent	Feature /group	Date	Phs	Fabric	Type	No	Wt gms	Thck mm	Flange type & ht Comments
5100	ditch 5104	F3 ditch W corner	350-420	6c	F2	Brick	1	116	46	Quite buff - close to F7
5100	ditch 5104	F3 ditch W corner	350-420	6c	F4	Brick	1	236	34	
5100	ditch 5104	F3 ditch W corner	350-420	6c	F1/7	Brick	2	332	32	x1 batch mark criss cross
5101	ditch 5087	F1 centre ditch	75-150	4	F6	Daub	6	124	n/a	Amorphous
5102	pit 5103	F10 large pit	350-420	6c	F1	Brick	1	20	30	
5102	pit 5103	F10 large pit	350-420	6c	Misc	?	1	12	?	
5102	pit 5103	F10 large pit	350-420	6c	F6	Daub	1	8	n/a	Amorphous
5105	ditch 5106	F8 W-E ditch	270-400	6	F3	Brick	1	36	37	
5105	ditch 5106	F8 W-E ditch	270-400	6	F3	Box	1	34	17	
5105	ditch 5106	F8 W-E ditch	270-400	6	Misc	?	4	44	?	
5107	ditch ?	F3 ditch W corner	350-420	6c	F1	Teg	2	64	22	Type 3b
5107	ditch ?	F3 ditch W corner	350-420	6c	F9	Box	1	40	19	4-toothed comb - oblique
5107	ditch ?	F3 ditch W corner	350-420	6c	F15	Box	3	368	20	x6-toothed combe criss cross. Conjoin
5109	ditch ?	F3 ditch W corner	300-400	6	F15b	Brick	1	134	38	
5109	ditch ?	F3 ditch W corner	300-400	6	F11	Box	1	50	21	reduced
5109	ditch ?	F3 ditch W corner	300-400	6	F1	Teg	1	22	?	?
5109	ditch ?	F3 ditch W corner	300-400	6	Misc	?	2	30	?	
5109	ditch ?	F3 ditch W corner	300-400	6	F6	Daub	2	44	n/a	x1 poss hearth lining/daub
5111	pit NW baulk	pit NW baulk	250-300	6a	Misc	?	34	646	?	
5111	pit NW baulk	pit NW baulk	250-300	6a	F6	Daub	24	126	n/a	Amorphous
5111	pit NW baulk	pit NW baulk	250-300	6a	F12	Briquetage	2	2	?	
5111	pit NW baulk	pit NW baulk	250-300	6a	F3	?Teg	2	112	16 & 20	
5111	pit NW baulk	pit NW baulk	250-300	6a	F1/3	?Teg	3	94	20 & 22	
5111	pit NW baulk	pit NW baulk	250-300	6a	F1	Imb	1	102	17	
5111	pit NW baulk	pit NW baulk	250-300	6a	F3	Imb	1	30	18	
5111	pit NW baulk	pit NW baulk	250-300	6a	F1	Brick	3	220	30-33	

Cntxt /Δ No	Parent	Feature /group	Date	Phs	Fabric	Type	No	Wt gms	Thck mm	Flange type & ht Comments
5111	pit NW baulk	pit NW baulk	250-300	6a	F1/3	Brick	1	86	40+	
5111	pit NW baulk	pit NW baulk	250-300	6a	F3	Brick	2	226	30+	
5111	pit NW baulk	pit NW baulk	250-300	6a	F15c	Brick	1	100	35	
5111	pit NW baulk	pit NW baulk	250-300	6a	F1	Box	2	246	23	4-toothed comb criss-cross. **Retained**
5111	pit NW baulk	pit NW baulk	250-300	6a	F2	Box	1	42	22	3-toothed comb - wavy
5111	pit NW baulk	pit NW baulk	250-300	6a	F3	Box	1	46	21	6-toothed comb - wavy
5111	pit NW baulk	pit NW baulk	250-300	6a	F1/4	Box	1	180	22	4-toothed combe - around edges and criss-cross. **Retained**
5111	pit NW baulk	pit NW baulk	250-300	6a	F1	Teg	1	52	22	Arched batch mark
5111	pit NW baulk	pit NW baulk	250-300	6a	F1/3	Teg	1	138	?	Part cutaway flange
5111	pit NW baulk	pit NW baulk	250-300	6a	F3b	Teg	2	148	22	Type 1b reversed Overfired/warped
5116	PH01 5117	F4 building	200-350	6	F7	Box	1	24	16	5-toothed comb criss cross
5116	PH01 5117	F4 building	200-350	6	F1	?Teg	1	30	22	
5116	PH01 5117	F4 building	200-350	6	F2	?Teg	1	18	21	
5116	PH01 5117	F4 building	200-350	6	Misc	?	2	22	?	Amorphous
5116	PH01 5117	F4 building	200-350	6	Misc	?	13	104	?	
5116	PH01 5117	F4 building	200-350	6	F6	Daub	7	28	n/a	Amorphous
5116	PH01 5117	F4 building	200-350	6	F1	Brick	1	22	30	
5116	PH01 5117	F4 building	200-350	6	F1/4	Brick	1	44	30	
5116	PH01 5117	F4 building	200-350	6	F1	Imb	2	44	11	Apex?
5118	PH02 5119	F4 building	70-370	6	F6	Daub	11	92	n/a	Amorphous
5118	PH02 5119	F4 building	70-370	6	F1	Brick	1	264	40	
5118 Δ10	PH02 5119	F4 building	70-370	6	F3b/4	?	1	10	16+	Slab
5120	PH03 5121	F4 building	130-250	6 res	F1	Brick	1	76	36	
5120	PH03 5121	F4 building	130-250	6 res	F2	Box	1	20	?	
5120	PH03 5121	F4 building	130-250	6 res	F14	?	1	3	?	
5120	PH03 5121	F4 building	130-250	6 res	F6	Daub	5	16	n/a	Amorphous

Cntxt /Δ No	Parent	Feature /group	Date	Phs	Fabric	Type	No	Wt gms	Thck mm	Flange type & ht Comments
5120 Δ11	PH03 5121	F4 building	130-250	6 res	F6	Daub	2	1	n/a	Amorphous
5122	PH04 5123	F4 building	270-400	6	F6	Daub	3	8	n/a	Amorphous
5122 Δ12	PH04 5123	F4 building	270-400	6	F6	Daub	20	16	n/a	Amorphous
5124	PH05 5125	F4 building	300-400	6	F1	?Teg	1	92	21	
5124	PH05 5125	F4 building	300-400	6	F2	Brick	1	92	30+	
5124	PH05 5125	F4 building	300-400	6	Misc	?	6	72	?	
5124	PH05 5125	F4 building	300-400	6	F6	Daub	6	12	n/a	Amorphous
5126	PH06 5127	F4 building	270-400	6	F1/3	Teg	1	340	23	Type 1e: Underside cutaway, arched batch mark. **Retained**
5126	PH06 5127	F4 building	270-400	6	F1/3	?Teg	1	80	23	Overfired
5126	PH06 5127	F4 building	270-400	6	F16a	?Teg	1	42	22	Overfired
5126	PH06 5127	F4 building	270-400	6	F1	?Teg	1	12	25	
5128	PH07 pipe 5129	F4 building	270-420	6	F1	Brick	1	206	43	Arched batch mark. Overfired/warped
5128	PH07 pipe 5129	F4 building	270-420	6	F6	Daub	3	14	n/a	Amorphous
5130 Δ16	PH08 5131	F4 building	330-400	6b-c	Misc	?	1	20	?	
5130	PH08 5131	F4 building	330-400	6b-c	F6	Daub	4	3	n/a	Amorphous
5132	PH09 5133	F4 building	200-300	6a-b	F3/4	?Teg	1	68	26	
5132	PH09 5133	F4 building	200-300	6a-b	Misc	?	1	22	?	
5134	PH10 pipe 5135	F4 building	270-420	6b-c	F1	?Teg	1	104	25	
5134	PH10 pipe 5135	F4 building	270-420	6b-c	F1	Brick	1	144	33	
5134	PH10 pipe 5135	F4 building	270-420	6b-c	Misc	?	10	134	?	Amorphous
5134 Δ18	PH10 pipe 5135	F4 building	270-420	6b-c	Misc	?	1	12	?	
5134 Δ18	PH10 pipe 5135	F4 building	270-420	6b-c	F6	Daub	8	12	n/a	Amorphous

Cntxt /Δ No	Parent	Feature /group	Date	Phs	Fabric	Type	No	Wt gms	Thck mm	Flange type & ht Comments
5136	PH10 pipe 5135	F4 building	270-420	6b-c	F2b	Brick	1	292	37	
5136	PH10 pipe 5135	F4 building	270-420	6b-c	F1/4	Brick	1	66	30+	
5138	PH12 5139	F4 building	350-400	6c	F1/3	Imb	1	48	16	
5138	PH12 5139	F4 building	350-400	6c	F1/7	?Teg	1	130	18	
5138	PH12 5139	F4 building	350-400	6c	Misc	?	1	72	?	
5138	PH12 5139	F4 building	350-400	6c	F6	Daub	1	3	n/a	Amorphous
5140	PH08 pipe 5202	F4 building	370-420	6c	Misc	?	1	12	?	
5142	PH09 pipe 5143	F4 building	270-400	6b-c	Misc	?	1	8	?	
5142 Δ22	PH09 pipe 5143	F4 building	270-400	6b-c	Misc	?	6	20	?	
5144	PH02 pipe 5145	F4 building		6	F15c	Box	2	248	19 & 24	4-toothed comb - criss cross 'Z'
5147	PH 5135	F4 building	270-400	6b-c	Misc	?	5	78	?	x1 arched batch mark
5147	PH 5135	F4 building	270-400	6b-c	F3b/4	?	1	54	?	?vessel (not right for imbrex). **Retained**
5150	ditch 5151	?	350-450	6c	F6	Daub	1	22	n/a	x1 flat face
5152	PH09 pipe 5240	F4 building			F2	Brick	1	192	37	
5153	Well 5054	F9 well	370-420	6c	F6	Daub	2	26	n/a	
5159	Well 5058	F9 well	370+	6c	Misc	?	14	262	?	
5159	Well 5058	F9 well	370+	6c	F3	?Teg	1	146	25	
5159	Well 5058	F9 well	370+	6c	F6	Daub	11	88	n/a	
5159	Well 5058	F9 well	370+	6c	F11b	?	1	10	13	Slab
5159	Well 5058	F9 sump/well	370+	6c	F14	?	2	18	?	Amorphous
5159 Δ28	Well 5058	F9 well	370+	6c	F6	Daub	8	2	n/a	
5166	pit 5174	?	370-420	6c	F2	Brick	1	76	33	
5166	pit 5174	?	370-420	6c	Misc	?	4	4	?	

Cntxt /Δ No	Parent	Feature /group	Date	Phs	Fabric	Type	No	Wt gms	Thck mm	Flange type & ht Comments
5167	Pit 5156	F10 large pit	270-420	6b-c	F3b/4	?	2	10	?	
5167	Pit 5156	F10 large pit	270-420	6b-c	F6	Daub	5	28	n/a	
5168 Δ38	Pit 5158	F10 large pit	370-420	6c	F6	Daub	2	6	n/a	
5169	Pit 5158	F10 large pit	270-420	6b-c	F2	Brick	1	42	31	Reduced
5169	Pit 5158	F10 large pit	270-420	6b-c	F11	?Teg	1	10	21	
5169	Pit 5158	F10 large pit	270-420	6b-c	Misc	?	1	10	?	
5181	PH 5182	F11A posthles	270-400	6	Misc	?	1	12	?	
5183	PH 5184	F11A posthles	150-250	5	F3	Teg	1	76	20	Type 2b: 38mm
5189	PH 5190	F11A posthles	270-400	6	F1/7	Brick	1	152	36	
5189	PH 5190	F11A posthles	270-400	6	F6	Daub	3	22	n/a	x1 flat face
5191	PH 5192	F11B posthles	270-420	6b-c	F1/3	?Teg	1	26	20	
5191	PH 5192	F11B posthles	270-420	6b-c	F6	Daub	1	2	n/a	Amorphous
5193	Well 5056	F9 well	300-400	6c	F6	Daub	2	3	n/a	Amorphous
5194	Well 5196	F9 well	300-400	6c	Misc	?	5	17	?	
5194	Well 5196	F9 well	300-400	6c	F11	Brick	1	84	32	
5194	Well 5196	F9 well	300-400	6c	F3/4	Brick	1	22	29	
5195	Well 5196	F9 well	270-420	6c	F3	?Teg	1	8	20	
5195 Δ26	Well 5196	F9 well	270-420	6c	F6	Daub	8	12	n/a	Amorphous
5197	Well 5196	F9 well	325+	6b-c	F2	?Teg	1	96	20	
5197	Well 5196	F9 well	325+	6b-c	F3	Box	1	150	19	6-toothed comb - criss cross
5197	Well 5196	F9 well	325+	6b-c	Misc	?	1	12	?	
5197 Δ27	Well 5196	F9 well	325+	6b-c	Misc	?	2	1	?	
5197 Δ27	Well 5196	F9 well	325+	6b-c	F6	Daub	11	22	n/a	Amorphous
5199	Pit 5095	F10 large pit	370+	6c	F6	Daub	3	8	n/a	Amorphous
5200	Pit 5156	F10 large pit	370-420	6c	F3	Brick	1	20	34	
5200	Pit 5156	F10 large pit	370-420	6c	F6	Daub	3	20	n/a	

Cntxt /Δ No	Parent	Feature /group	Date	Phs	Fabric	Type	No	Wt gms	Thck mm	Flange type & ht Comments
5201	PH08 pipe 5202	F4 building	325-420	6c	F6	Daub	1	14	n/a	x1 flat face, c. 15mm di wattle impressions
5201 Δ32	PH08 pipe 5202	F4 building	325-420	6c	F6	Daub	6	14	n/a	
5204	Ditch 5205	F1 centre ditch	70-150	4	F6	Daub	18	154	n/a	Amorphous
5206	Ditch 5207	F3 ditch W corner	350-420	6c	Misc	?	13	88	?	
5206	Ditch 5207	F3 ditch W corner	350-420	6c	F3b/4	Slab	7	50	13	
5206	Ditch 5207	F3 ditch W corner	350-420	6c	F6	Daub	5	16	n/a	
5206	Ditch 5207	F3 ditch W corner	350-420	6c	F1/3	Brick	1	72	33+	
5206	Ditch 5207	F3 ditch W corner	350-420	6c	F1/4	Brick	1	204	30	
5208	Ditch 5209	F3 ditch W corner	370-420	6c	F6	Daub	12	106	n/a	Amorphous
5208	Ditch 5209	F3 ditch W corner	370-420	6c	Misc	?	1	18	?	
5208	Ditch 5209	F3 ditch W corner	370-420	6c	F15b	?Teg	1	96	24	
5210	Ditch 5211	F1 centre ditch	70-250	4	F11c	Brick	1	252	41	
5211	Well 5154	F9 well	370+	6c	Misc	?	5	116	?	Labelled 6211
5212	Well 5154	F9 well	370+	6c	F1/3	Brick	1	330	40	Arced batch mark
5212 Δ29	Well 5154	F9 well	370+	6c	Misc	?	2	48	?	
5212 Δ29	Well 5154	F9 well	370+	6c	F6	Daub	15	28	n/a	
5216	PH 5135	F4 building	?	?	F1/3	?Teg	1	74	22	
5216	PH 5135	F4 building	?	?	F1/3	Brick	2	104	34	
5216	PH 5135	F4 building	?	?	F1	Teg	1	198	?	F1? waster - misformed, expanded. **Retained**
5217 Δ36	PH11 pipe 5137	F4 building			F6	Daub	3	8	n/a	Amorphous
5221	PH 5221	F10 large pit	240-400	6	F2	?Teg	1	124	22	
5223	PH08 pipe 5202	F4 building			F9	?Teg	1	92	20	
5225	Well 5056	F9 well	370+	6c	F1	Brick	4	1152	32, 37, 42	Well/over-fired
5225	Well 5056	F9 well	370+	6c	F3	Box	1	198	14	

Cntxt /Δ No	Parent	Feature /group	Date	Phs	Fabric	Type	No	Wt gms	Thck mm	Flange type & ht Comments
5225 Δ50	Well 5056	F9 well	370+	6c	F6	Daub	9	130	n/a	
5225 Δ50	Well 5056	F9 well	370+	6c	F13	Daub	5	602	n/a	Fine grey clay - amorphous
5226	Well 5056	F9 well	300-370	6b-c	F1/3	Brick	1	96	30	
5226	Well 5056	F9 well	300-370	6b-c	F2	Teg	1	310	25	Type 3b: 45mm underside cutaway and arced batch mark. **Retained**
5226 Δ40	Well 5056	F9 well	300-370	6b-c	F15	Brick	1	114	37	
5226 Δ40	Well 5056	F9 well	300-370	6b-c	Misc	?	6	128	?	
5226 Δ40	Well 5056	F9 well	300-370	6b-c	F6	Daub	8	26	n/a	Amorphous
5228	PH 5229	F4 building	post 400	6c/7	F2	?Teg	1	46	20	Worn
5228	PH 5229	F4 building	post 400	6c/7	Misc	?	1	20	?	
5231	PH13 pipe 5232	F4 building	270-350	6	Misc	?	3	80	?	
5234	PH 5232	F4 building	?	?	Misc	?	1	50	?	
5241	PH06 pipe 5242	F4 building			F3	?Teg	2	72	14	
5243	PH06 pipe 5242	F4 building	370+	6c	F3	?Teg	1	22	25	
5243	PH06 pipe 5242	F4 building	370+	6c	F1/3	Box	1	106	18	5+ toothed comb - criss cross
5243	PH06 pipe 5242	F4 building	370+	6c	F6	Daub	5	112	n/a	Amorphous
5243 Δ47	PH06 pipe 5242	F4 building	370+	6c	F6	Daub	61	94	n/a	Amorphous
5245	PH04 pipe 5246	F4 building	300-400	6b-c	F2	?Teg	1	36	18	
5245	PH04 pipe 5246	F4 building	300-400	6b-c	F2	Teg	1	80	24	Type 3b: 38mm
5245	PH04 pipe 5246	F4 building	300-400	6b-c	Misc	?	2	8	?	
5245 Δ42	PH04 pipe 5246	F4 building	300-400	6b-c	F3	Brick	1	38	30	
5245 Δ42	PH04 pipe 5246	F4 building	300-400	6b-c	F4	Teg	1	56	20	

Cntxt /Δ No	Parent	Feature /group	Date	Phs	Fabric	Type	No	Wt gms	Thck mm	Flange type & ht Comments
5245 Δ42	PH04 pipe 5246	F4 building	300-400	6b-c	Misc	?	4	66	?	
5245 Δ42	PH04 pipe 5246	F4 building	300-400	6b-c	F6	Daub	3	24	n/a	Amorphous
5247 Δ43	PH07 pipe 5129	F4 building			F6	Daub	2	2	n/a	Amorphous
5248 Δ49	PH04 pipe 5246	F4 building	270-400	6b-c	F6	Daub	8	38	n/a	Amorphous
5251	PH1 5117	F4 building	180-250	5	F3	?Teg	1	22	26	
5251	PH1 5117	F4 building	180-250	5	F15	Box	1	108	17	Worn criss-cross combing
5251	PH1 5117	F4 building	180-250	5	F12	Briquetage	1	3	?	
5251	PH1 5117	F4 building	180-250	5	F6	Daub	3	20	n/a	Amorphous
5251	PH1 5117	F4 building	180-250	5	Misc	?	6	16	?	Amorphous
5254	PH 5255	F11A posthles			Misc	?	1	4	?	Amorphous
5261	PH1 5117	F4 building	250-350	6	Misc	?	5	82	?	Amorphous
5261	PH1 5117	F4 building	250-350	6	F6	Daub	6	28	n/a	Amorphous
5261 Δ53	PH1 5117	F4 building	250-350	6	F6	Daub	10	6	n/a	Amorphous
5262	PH1 pipe 5266	F4 building	270-400	6	F2	Imb	2	30	12	Apex (if not land drain!)
5262	PH1 pipe 5266	F4 building	270-400	6	F6	Daub	4	22	n/a	Amorphous
5262 Δ52	PH1 pipe 5266	F4 building	270-400	6	F6	Daub	1	2	n/a	Amorphous
5263	PH1 5117	F4 building	300-370	6	F1	Brick	1	176	37	
5263	PH1 5117	F4 building	300-370	6	F2	Brick	1	564	37	Fresh. Vitrified base
5264	PH1 5117	F4 building	150-270	5-6	F1	Brick	1	266	38	

16.3.1 An assessment of the metalwork from the 2014 season of excavation at Bridge Farm, Barcombe, East Sussex by Luke Barber

Introduction

The archaeological excavations recovered 791 pieces of metalwork, weighing 8396g, from 99 individually numbered contexts. This total includes 256 pieces, weighing 1066g, from 37 of the environmental residues as well as a number of metal detected pieces from the spoil and surrounding ploughsoil.

The entire assemblage has been listed for archive on pro forma during assessment with that data being used to create an excel spreadsheet. Each artefact was also allocated an estimated period and general functional group where possible (eg Roman, Medieval, Early Post-medieval and Dress accessories, nail, household, waste etc). The majority of ironwork is not intrinsically datable to a particular period (notably the nails), however, where such material has been recovered from an uncontaminated dated Roman context the ceramic date has been allocated to such metalwork. A notable proportion of the ironwork is in poor condition, usually with heavy adhering corrosion products. Although these obscure the form of some pieces it is generally possible to get an overall impression of form in most instances. Certainly there are a number of pieces that would benefit from x-ray prior to analysis stage (these are highlighted as amorphous in the excel archive). However, the current groupings are considered appropriate at assessment stage and give a good overview of the assemblage.

A range of metal types and periods are represented and the combined assemblage is characterised in Table 1. The vast majority is, or is strongly suspected of being, Roman in date. This material is generally in a poor state of preservation, with the few post-Roman pieces being in notably better condition. The ironwork has not survived particularly well, suggesting a slightly acidic burial environment, probably a result of both the natural geology and farm chemical agents. Typically the lead is in fairly good condition, though with notable coatings of white corrosion products, but the copper alloy items are very poorly preserved/fragmented. This poor condition was also noted during the assessment of the few Roman copper alloy objects from the initial metal detector survey and the 2013 assemblage.

Period/ type	Unstratified	Roman (General)	Early Roman (Phases 4-5)	Late Roman (Phase 6[h])	Totals
No. contexts	*10*	*12*	*13*	*64*	*99*
Iron	104/1669g	71/581g	49/658g	527/4619g	751/7527g
Copper Alloy	16/147g	-	-	3/2g	19/149g
Lead	19/717g	-	-	-	19/717g
Silver	1/1g	-	-	-	1/1g
Pewter	1/2g	-	-	-	1/2g
Totals	141/2536g	71/581g	49/658g	530/4621g	791/8396g

Table 1: Characterisation of metalwork assemblage by spot dated context.

Roman

As the generally 'Roman' and 1st- to 2nd- century assemblages are small and not dissimilar to the later Roman assemblage in general functionality all are considered together for the current assessment.

The Roman ironwork is totally dominated by nails and fragments thereof. These account for 586 items (5457g) and on the whole consist of general-purpose types with circular low-domed heads with diameters between 14-17mm. Most are broken but where complete, lengths range between 45 and 75mm. There is no notable difference between the 46 early Roman examples and the 478 late Roman examples. There is also a scatter of large structural nail fragments, often with heads in excess of 20mm across. None are complete though one fragment shows them to have been in excess of 135mm long (post-hole [5123], fill

[5122], PH4, F4 building). Nails were recovered from virtually all contexts, including 328 pieces from well/sump F9. There were also 338 examples associated with the F4 building, however, although some of these came out of post-pipes (and could therefore be from the building itself) the majority were from the primary post-hole construction backfills. This rather suggests that much of the material may represent a background scatter from other earlier timber structures, though whether this was just refuse or deliberately stockpiled for reworking is uncertain. No other definite structural ironwork was recovered.
The assemblage also contains 47 (87g) hobnails, the only diagnostically Roman ironwork in its own right. All are of similar size ranges to the 59 recovered from the 2013 excavations. Hobnails were recovered from unstratified (x5) and early Roman (x2) deposits, with the remainder being recovered from late Roman or general Roman contexts. They were recovered from all types of context again – including eight from sump/well F9, two from pit F10 and 29 associated with the post-holes of building F4. Although 16 of these were from post-pipes, the remainder were from the initial post-hole backfills. As such it is again suspected that most of this material is a general background scatter. However, the general quantities recovered from the site so far indicate hobnail loss was quite high. This may well have been due to people working on a clay-rich subsoil giving rise to a 'sucking' muddy environment that detached loose hobnails with some ease. Other stratified items of dress were very limited: There were a few scraps from a possible brooch in hearth F7 and a plain copper alloy finger ring with adjustable 15-18mm diameter band from sump/well F9 (fill [5225]). Unstratified items of Roman dress include an iron pin with spherical copper alloy head, part of a trumpet brooch (from metal detecting around the trench. The latter can be paralleled to a 1st- to 2nd- century example illustrated by Hattatt (1989, No. 954)) and a zoomorphic plate brooch of the 2nd century in the form of a hound with red enamel inlay (also from the surrounding field. cf Hattatt 1989 No. 1188). The spoil from Trench 5 yielded a partial silver ring bezel with inscription ([V]TER [F]ELIX (use with good luck, *pers comm.* Richard Hobbs) of 4th- century type. A further ring, this time a complete key-ring, was located in the surrounding ploughsoil.
Other Roman metalwork includes what appears to be (prior to x-ray) 10 fragments of knife/tool blades, typically measuring between 22 and 28mm wide. Once again these pieces have no obvious concentration, being randomly scattered in pits, ditches and post-holes associated with building F4. There are also nine additional Roman pieces of ironwork that are unidentifiable strip fragments or amorphous blobs with no discernible form.
Unlike the 2013 excavations the current ones did not produce stratified lead items – all such coming from unstratified deposits and thus being of uncertain age. Two unstratified probable lead spindle whorls were recovered – one of disc form measuring 21mm in diameter, 1.4mm thick and with a 3.5mm diameter central perforation. The other is more typical with low domed profile, with a 30mm diameter, 9mm thickness and 9.7mm diameter central perforation. It is suspected at least the latter is of Roman date.
The assemblage includes six unstratified weights/possible weights, some merely sheet discs but the largest (283g: from Field DC4) is more deliberately formed. This is conical (44mm diameter base and height of 43mm) with a suspension loop at the top and two vertically drilled 6mm diameter holes near the weight's edges. There is also a biconical steelyard weight from the surrounding field and a copper alloy arm fragment possibly from from a heavy steelyard balance though no parallel was established during initial work for this assessment. Whatever the case, the presence of a number of items associated with weighing mirrors the 2013 assemblage and suggests busy commerce on site. Although much is undatable it is suspected most, if not all, is of Roman date. Similarly the nine fragments of lead and copper alloy molten and sheet off-cut waste from unstratified deposits strongly hints at some non-ferrous metalworking at the site. This may also have been during the Roman occupation. However, some caution is needed as unstratified deposits have also produced a scatter of post-Roman finds. Of particular note

are three pieces of decorative metalwork with Early Anglo-Saxon style relief decoration from the surrounding field (all found by David Cunningham prior to the excavation). The pieces appear to be mounts or dress ornaments but suggest the possibility of a continuation of activity into the early Anglo-Saxon period. There are two buckle fragments, part of a frame and a housing plate, that could be of Saxon or medieval date and certainly the key bit from the same ploughsoil appears to be of medieval date. It is clear from the clay pipe assemblage that the land was being quite intensively used during the 17th century and the metalwork includes at least one probable early post-medieval lead cloth seal, a simple prick spur fragment and a decorative (bridle?) mount. There is also an 18th- century musket ball and pewter Napoleonic military button of the 88th regiment of foot (raised in 1793) as well as a fragmentary toy lead soldier of the later 19th to early 20th century.

Potential of the Assemblage

The metalwork assemblage from the site is considered to hold a mixed potential for further analysis. The medieval and later assemblage, all recovered from unstratified deposits, is not dissimilar to the periods and activities suggested by the larger group from the metal detecting survey and 2013 assemblage. The current assemblage suggest activity from the 13/14th to 19th centuries but not on a particularly intensive level (with the possible exception of the mid/later 17th century). As such this material, including items of uncertain date from unstratified deposits, is not considered to hold any potential for further analysis.

The Roman assemblage is much larger and relates directly to the activity associated with the excavated features. However, the vast majority of the stratified assemblage consists of nails/nail fragments and there are few diagnostic pieces, whether from stratified or unstratified deposits, that shed new light on the site's economy beyond what the earlier assemblages did. However, they add to the growing corpus of material that demonstrates the apparently wide economic base of the settlement and are therefore worth publishing for that reason.

The presence of potential Early Anglo-Saxon material, even if from the surrounding ploughsoil, is of interest as it hints that activity at the site may have extended into that period – the evidence needs to be carefully compared with the latest pottery from the site. A limited amount of further work is proposed.

Proposed Tasks

1) Go through the assemblage splitting it between items for retention/further analysis and repackaging these accordingly. At the same time the remainder of pieces not requiring further analysis should be split between material for handling/teaching collections for the local schools and material to discard. (Time: Metalwork specialist 1 day).
2) Looking for parallels for a number of objects – mainly associated with the unstratified but diagnostic pieces of Roman and Early Anglo-Saxon material (Time: Metalwork specialist 2 days)
3) Production of a summary report on the metalwork from the excavations outlining the size and range of assemblage and what light it sheds on the site's population and economy. Much of this will be extracted from the above factual statement but further work will be needed on the parallels for some items and closer comparison with the previous assemblages from the site. The report will include a catalogue of illustrated material. Up to 20 pieces are proposed for illustration (Metalwork specialist – 1.5 days).

Reference: Hattatt, R. 1989. *Ancient Brooches and Other Artefacts.* Oxbow Books, Oxford.

16.3.2 Catalogue of the metalwork from the 2014 season of excavation at Bridge Farm, Barcombe, East Sussex by Luke Barber

Cntxt	SF No	Δ No	Parent	Feature /Group	Date	Period	Metal	No	Wt (g)	Description	Type	Object Period	Recommend /comments
5000			cleaning layer	n/a	u/s	U/S	Fe	36	714	Nail frags (general purpose)	Nail	?	
5000			cleaning layer	n/a	u/s	U/S	Fe	3	37	Nails (general purpose). 50, 55 and 70mm long	Nail	?	
5000			cleaning layer	n/a	u/s	U/S	Fe	1	7	Nail machine made 75mm long, 8mm di head	Nail	LPM	
5000			cleaning layer	n/a	u/s	U/S	Fe	6	256	Large nail frags (structural)	Nail	?	
5000			cleaning layer	n/a	u/s	U/S	Fe	3	7	Hobnails (v corroded)	Dress	RB	
5000			cleaning layer	n/a	u/s	U/S	Fe	1	27	Blade fragment, tapering 21-28mm wide	Tool	?	
5000			cleaning layer	n/a	u/s	U/S	Fe	1	13	?sheet disc c. 34mm di	Misc	?	
5000			cleaning layer	n/a	u/s	U/S	Fe	1	1	Chain link 16mm di	Misc	LPM	
5000			cleaning layer	n/a	u/s	U/S	Fe	4	40	Too corroded to see form	Misc	?	
5000			cleaning layer	n/a	u/s	U/S	Pb	1	14	Waste sheet (poss unrolled)	Waste	?	
5000			cleaning layer	n/a	u/s	U/S	Fe	1	12	Nail (general purpose) 90mm long, 15mm di head. Cleaned by conservator!	Nail		
5001			cleaning layer	F1 central ditch	100-400	U/S	Fe	32	266	Nail frags (general purpose)	Nail	?	
5001			cleaning layer	F1 central ditch	100-400	U/S	Fe	2	30	Nails (general purpose) 42 & 60mm long	Nail	?	
5001			cleaning layer	F1 central ditch	100-400	U/S	Fe	3	146	Large nail frags. X1 with 35mm di low domed head	Nail	?	
5001			cleaning layer	F1 central ditch	100-400	U/S	Fe	2	6	Hobnails (too corroded for dimensions)	Dress	RB	
5001			cleaning layer	F1 central ditch	100-400	U/S	Fe	1	23	Strip frag 25mm wide	Misc	?	
5001			cleaning layer	F1 central ditch	100-400	U/S	Pb	1	8	Irreg flat molten waste	Waste	?	
5003			PH13 5233	F4 building	250-375	6	Fe	2	25	Nail frags (general purpose)	Nail	?	

Cntxt	SF No	Δ No	Parent	Feature /Group	Date	Period	Metal	No	Wt (g)	Description	Type	Object Period	Recommend /comments
5005			cleaning layer	n/a	270-400	6	Fe	1	7	Nail frag (general purpose)	Nail	?	
5006			Ditch 5007	F1 central ditch	70-200	4	Fe	6	64	Nail frags (general purpose)	Nail	?	
5009			Ditch 5010	F3 ditch W corner	270-410	6c	Fe	1	2	Curving/circular strip frag 6x4mm section	Misc	?	
5009			Ditch 5010	F3 ditch W corner	270-410	6c	Fe	1	37	Tapering strip with S-shaped twisted section	Misc	?	
5013			Ditch 5014	F3 ditch W corner	375-425	6c	Fe	27	282	Nail frags (general purpose)	Nail	?	
5013			Ditch 5014	F3 ditch W corner	375-425	6c	Fe	2	43	Nails (general purpose) 57-60mm long	Nail	?	
5013			Ditch 5014	F3 ditch W corner	375-425	6c	Fe	2	61	Large nail frags. Head di 31mm	Nail	?	
5013			Ditch 5014	F3 ditch W corner	375-425	6c	Fe	1	23	Blade frag 22mm wide	Tool	?	
5013		4	Ditch 5014	F3 ditch W corner	375-425	6c	Fe	2	15	Nail frags (general purpose)	Nail	?	
5013		4	Ditch 5014	F3 ditch W corner	375-425	6c	Fe	1	3	Hobnails (too corroded for dimensions)	Dress	RB	
5013	509		Ditch 5014	F3 ditch W corner	375-425	6c	Fe	1	2	Ring/link 20mm di with 3mm section wire	Misc		
5015			Ditch 5014	F3 ditch W corner	375-425	6c	Fe	1	6	Nail frags (general purpose)	Nail	?	
5017			Hearth 5173	F2 banjo hearth	150-250	5	Fe	2	28	Nail frags (general purpose)	Nail	?	
5017		1	Hearth 5173	F2 banjo hearth	150-250	5	Fe	2	13	Nail frags (general purpose)	Nail	?	
5017		1	Hearth 5173	F2 banjo hearth	150-250	5	Fe	1	1	Hobnail 14mm long, 8mm di domed head 5mm tall	Dress	RB	
5018			Ditch 5019	F3 ditch W corner	350-420	6c	Fe	5	57	Nail frags (general purpose)	Nail	?	

Cntxt	SF No	Δ No	Parent	Feature /Group	Date	Period	Metal	No	Wt (g)	Description	Type	Object Period	Recommend /comments
5020			Ditch 5021	F3 ditch W corner	200-410	6	Fe	3	26	Nail frags (general purpose)	Nail	?	
5020	531		Ditch 5021	F3 ditch W corner	200-410	6	Fe	1	5	Nail (general purpose) 46mm long, 14mm di head. Cleaned by conservator	Nail		
5021			Ditch 5021	F3 ditch W corner	200-410	6	Fe	5	48	Nail frags (general purpose)	Nail		
5021			Ditch 5021	F3 ditch W corner	200-410	6	Fe	1	11	Nail (general purpose) 61mm long, 17mm di head	Nail		
5021			Ditch 5021	F3 ditch W corner	200-410	6	Fe	1	91	Large nail frag (too corroded)	Nail		
5022			PH04 5123	F4 building	270-400	6	Fe	1	4	Nail frag (general purpose)	Nail		
5024			PH 5025	G1 postholes	?	RB	Fe	1	3	Nail frag (general purpose)	Nail		
5028			PH 5029	G2 postholes	300-350	6b	Fe	1	10	Nail frag (general purpose)	Nail		
5030			Ditch 5031	F3 ditch W corner	370-420	6c	Fe	2	16	Nail frags (general purpose)	Nail		
5034		3	PH 5035	G3 W corner	325-370	6b	Fe	1	1	?Nail frag	Nail		
5039			PH 5040	G3 W corner	400-500	7	Fe	4	30	Nail frags (general purpose)	Nail		
5041			PH 5042	G3 W corner	300-400+	6	Fe	1	7	Nail frag (general purpose)	Nail		
5043		4	PH 5044	G3 W corner	?	RB	Fe	1	1	Nail frag (general purpose)	Nail		
5053			Hearth 5054	F7 forging hearth	325-420	6c	Fe	1	40	Large nail frag	Nail		
5053	586		Hearth 5054	F7 forging hearth	325-420	6c	Cu al	2	1	?Brooch frags. Totally mineralised & too small to be certain	Dress	RB	
5057			Well 5058	F9 sump/well	350-410	6c	Fe	1	5	Nail frag (general purpose)	Nail		
5057			Well 5058	F9 sump/well	350-410	6c	Fe	1	3	Hobnail (too corroded)	Dress		

Cntxt	SF No	Δ No	Parent	Feature /Group	Date	Period	Metal	No	Wt (g)	Description	Type	Object Period	Recommend /comments
5063			Well 5056	F9 sump/well	350-410	6c	Fe	2	10	Nail frags (general purpose)	Nail		
5063	584		Well 5056	F9 sump/well	350-410	6c	Fe	1	11	Nail frag (general purpose. Head 21mm di. Cleaned by conservator	Nail		
5065			PH 5066	n/a	260-400	6	Fe	1	7	Nail frag (general purpose)	Nail		
5065			PH 5066	n/a	260-400	6	Fe	1	14	Knife/tool blade frag? Poss tanged handle	Tool		
5067			Well 5058	F9 sump/well	350-410	6c	Fe	2	5	Nail frags (general purpose)	Nail		
5067			Well 5058	F9 sump/well	350-410	6c	Fe	2	19	Blade frag, 24mm wide	Tool		
5068			Ditch/pit 5069	G3 W corner	100-200	5	Fe	1	13	Nail frag (general purpose)	Nail		
5070			Ditch 5071	G3 W corner	43-140	4	Fe	2	121	Large nail frag 15x8mm section shank	Nail		
5074			Pit 5075	G2	250+	6b	Fe	2	14	Nail frags (general purpose)	Nail		
5085		7	Well 5058	F9 sump/well	350+	6c	Fe	7	20	Nail frags (general purpose)	Nail		
5085		7	Well 5058	F9 sump/well	350+	6c	Fe	4	2	Hobnails (good condition) 11mm long, 8mm di head; 12mm long, 9mm di head; 11mm long, 7mm di head; 11mm long, 8mm di head	Dress		
5086			Ditch 5087/5101	F1 central ditch	70-200	4	Fe	4	39	Nail frags (general purpose)	Nail		
5086			Ditch 5087/5101	F1 central ditch	70-200	4	Fe	1	34	Blade frag, 25mm wide	Tool		
5094			pit 5095	F10 large pit	370+	6c	Fe	1	17	Nail frag (general purpose)	Nail		
5094			pit 5095	F10 large pit	370+	6c	Fe	1	15	Blade frag c. 28mm wide	Tool		
5100			ditch 5104	F3 ditch W corner	350-420	6c	Fe	2	24	Nail frags (general purpose)	Nail		
5101			Ditch 5087/5101	F1 central ditch	75-150	4	Fe	1	11	Nail frag (general purpose)	Nail		

Cntxt	SF No	Δ No	Parent	Feature /Group	Date	Period	Metal	No	Wt (g)	Description	Type	Object Period	Recommend /comments
5102			pit 5103	F10 large pit	350-420	6c	Fe	2	38	Nail frags (general purpose)	Nail		
5102		44	pit 5103	F10 large pit	350-420	6c	Fe	1	1	Hobnail. 11mm long, 7mm di head	Dress		
5107			ditch ?	F3 ditch W corner	350-420	6c	Fe	1	9	Nail frag (general purpose)	Nail		
5111			pit NW baulk	pit NW baulk	250-300	6a	Fe	27	346	Nail frags (general purpose)	Nail		
5111			pit NW baulk	pit NW baulk	250-300	6a	Fe	1	45	Large nail frag	Nail		
5114			ditch 5115	F1 central ditch	70-200	4	Fe	1	28	?Large nail frag	Nail		
5116			PH01 5117	F4 building	200-350	6	Fe	20	181	Nail frags (general purpose)	Nail		
5116			PH01 5117	F4 building	200-350	6	Fe	2	35	Nails (general purpose) 57 & 75mm long with 15 & 20mm di heads	Nail		
5116			PH01 5117	F4 building	200-350	6	Fe	1	3	Hobnail (too corroded)	Dress		
5116			PH01 5117	F4 building	200-350	6	Fe	1	71	Large nail frag	Nail		
5116			PH01 5117	F4 building	200-350	6	Fe	1	35	Blade frag, 28mm wide	Tool		
5116			PH01 5117	F4 building	200-350	6	Fe	1	22	Nail (general purpose) 63mm long, 16mm di head. Adhering to grog tempered pot sherd	Nail		
5118			PH02 5119	F4 building	70-370	6	Fe	21	191	Nail frags (general purpose)	Nail		
5118			PH02 5119	F4 building	70-370	6	Fe	2	38	Nails (general purpose) 55 & 73mm long, 16 & 21mm di heads	Nail		
5118			PH02 5119	F4 building	70-370	6	Fe	2	41	Large nail frags. Head di 31mm	Nail		
5118			PH02 5119	F4 building	70-370	6	Fe	5	86	Blobs - too much corrosion to see form	Misc		

Cntxt	SF No	Δ No	Parent	Feature /Group	Date	Period	Metal	No	Wt (g)	Description	Type	Object Period	Recommend /comments
5118		20	PH02 5119	F4 building	70-370	6	Fe	11	34	Nail frags (general purpose)	Nail		
5120			PH03 5121	F4 building	130-250	6 res	Fe	13	112	Nail frags (general purpose)	Nail		
5120		11	PH03 5121	F4 building	130-250	6 res	Fe	3	24	Nail frags (general purpose)	Nail		
5120		11	PH03 5121	F4 building	130-250	6 res	Fe	1	1	Hobnail 15mm long, 7mm di head	Dress		
5122			PH04 5123	F4 building	270-400	6	Fe	7	61	Nail frags (general purpose)	Nail		
5122			PH04 5123	F4 building	270-400	6	Fe	2	66	Nails (general purpose) 67 & 69mm long	Nail		
5122		12	PH04 5123	F4 building	270-400	6	Fe	8	27	Nail frags (general purpose)	Nail		
5122	595?	12	PH04 5123	F4 building	270-400	6	Fe	5	9	Hobnail 18mm long, 10mm di head	Dress		part of SF595?
5122	595?		PH04 5123	F4 building	270-400	6	Fe	23	186	Nail frags (general purpose)	Nail		part of SF595?
5122			PH04 5123	F4 building	270-400	6	Fe	1	11	Nail (general purpose) 57mm long, 19mm di head	Nail		
5122			PH04 5123	F4 building	270-400	6	Fe	1	13	Blade frag	Tool		
5122	515		PH04 5123	F4 building	270-400	6	Fe	1	126	Large nail/bolt fragment 135mm+ square section shank tapering to a point. Cleaned by conservator	Nail		
5124			PH05 5125	F4 building	300-400	6	Fe	2	5	Hobnails. Heads 7 and 15mm di	Dress		
5124			PH05 5125	F4 building	300-400	6	Fe	6	35	Nail frags (general purpose)	Nail		
5126			PH06 5127	F4 building	270-400	6	Fe	1	33	Blade/tool frag, 27mm wide	Tool		
5126			PH06 5127	F4 building	270-400	6	Fe	3	27	Nail frags (general purpose)	Nail		
5126			PH06 5127	F4 building	270-400	6	Fe	1	66	Large nail frag	Nail		

Cntxt	SF No	Δ No	Parent	Feature /Group	Date	Period	Metal	No	Wt (g)	Description	Type	Object Period	Recommend /comments
5126		35	PH06 5127	F4 building	270-400	6	Fe	1	2	Nail frags (general purpose)	Nail		
5126		35	PH06 5127	F4 building	270-400	6	Fe	1	1	Hobnail, 15mm long, 12mm di head	Dress		
5128			PH07 pipe 5129	F4 building	270-420	6	Fe	17	105	Nail frags (general purpose)	Nail		
5128	594		PH07 pipe 5129	F4 building	270-420	6	Fe	2	17	Nails (general purpose) 54 & 54mm long, 14-15mm di heads	Nail		
5128	594		PH07 pipe 5129	F4 building	270-420	6	Fe	5	255	Large nail frags	Nail		
5130		16	PH08 5131	F4 building	330-400	6b-c	Fe	4	23	Nail frags (general purpose)	Nail		
5132			PH09 5133	F4 building	200-300	6a-b	Fe	1	19	Nail (general purpose) 62mm long	Nail		
5134			PH10 pipe 5135	F4 building	270-420	6b-c	Fe	8	48	Nail frags (general purpose)	Nail		
5134			PH10 pipe 5135	F4 building	270-420	6b-c	Fe	1	9	Large nail frag	Nail		
5134		18	PH10 pipe 5135	F4 building	270-420	6b-c	Fe	1	2	Hobnail (too corroded)	Dress		
5136			PH11 pipe 5137	F4 building	240-370	6b	Fe	3	33	Nail frags (general purpose)	Nail		
5136			PH11 pipe 5137	F4 building	240-370	6b	Fe	1	3	Hobnail (too corroded)	Dress		
5136		19	PH11 pipe 5137	F4 building	240-370	6b	Fe	14	73	Nail frags (general purpose)	Nail		
5136		19	PH11 pipe 5137	F4 building	240-370	6b	Fe	3	4	Hobnail (too corroded)	Dress		
5138			PH12 5139	F4 building	350-400	6c	Fe	2	15	Nail frags (general purpose)	Nail		
5140		21	PH08 pipe 5202	F4 building	370-420	6c	Fe	1	6	Nail frag (general purpose)	Nail		
5140		21	PH08 pipe 5202	F4 building	370-420	6c	Fe	2	3	Hobnails: 12mm long, 9mm di head & 15mm long, 10mm di head	Dress		

Cntxt	SF No	Δ No	Parent	Feature /Group	Date	Period	Metal	No	Wt (g)	Description	Type	Object Period	Recommend /comments
5142			PH09 pipe 5143	F4 building	270-400	6b-c	Fe	5	38	Nail frags (general purpose)	Nail		
5142		22	PH09 pipe 5143	F4 building	270-400	6b-c	Fe	6	25	Nail frags (general purpose)	Nail		
5144		23	PH02 pipe 5145	F4 building		6	Fe	3	13	Nail frags (general purpose)	Nail		
5144		23	PH02 pipe 5145	F4 building		6	Fe	1	2	Hobnail (too corroded)	Dress		
5147			PH 5135	F3 ditch W corner	300-400	6	Fe	2	9	Nail frags (general purpose)	Nail		
5148			PH03 pipe 5149	F4 building	250-350	6b	Fe	1	17	Nail frag (general purpose)	Nail		
5148		24	PH03 pipe 5149	F4 building	250-350	6b	Fe	4	12	Nail frags (general purpose)	Nail		
5152		30	PH09 pipe 5240	F4 building		RB	Fe	3	7	Nail frags (general purpose)	Nail		
5152		30	PH09 pipe 5240	F4 building		RB	Fe	1	2	Hobnail 20mm long, 16mm di head	Dress		
5153			Well 5054	F9 sump/well	370-420	6c	Fe	3	18	Nail frags (general purpose)	Nail		
5159			Well 5058	F9 sump/well	370+	6c	Fe	13	100	Nail frags (general purpose)	Nail		
5159		25	Well 5058	F9 sump/well	370+	6c	Fe	1	8	Nail frag (general purpose)	Nail		
5167		41	Pit 5156	F10 large pit	270-420	6b-c	Fe	2	13	Nail frags (general purpose)	Nail		
5167		41	Pit 5156	F10 large pit	270-420	6b-c	Fe	1	1	Hobnail 11mm long, 6mm di head	Dress		
5179			PH 5180	F11A postholes	150-250	5	Fe	1	10	Nail frag (general purpose)	Nail		
5181			PH 5182	F11A postholes	270-400	6	Fe	1	9	Nail frag (general purpose)	Nail		
5183			PH 5184	F11A postholes	150-250	5	Fe	3	25	Nail frags (general purpose)	Nail		
5187			PH 5188	F11A postholes		RB	Fe	3	18	Nail frags (general purpose)	Nail		

Cntxt	SF No	Δ No	Parent	Feature /Group	Date	Period	Metal	No	Wt (g)	Description	Type	Object Period	Recommend /comments
5187			PH 5188	F11A postholes		RB	Fe	2	38	Nails (general purpose. 51 & 67mm long, 18mm di heads	Nail		
5187		33	PH 5188	F11A postholes		RB	Fe	4	10	Nail frags (general purpose)	Nail		
5187		33	PH 5188	F11A postholes		RB	Fe	2	4	Hobnails (too corroded for dimensions)	Dress		
5189			PH 5190	F11A postholes	270-400	6	Fe	1	4	Nail frag (general purpose)	Nail		
5194			Well 5196	F9 sump/well	300-400	6c	Fe	1	7	Nail frag (general purpose)	Nail		
5195		26	Well 5196	F9 sump/well	270-420	6c	Fe	2	10	Nail frags (general purpose)	Nail		
5197		27	Well 5196	F9 sump/well	325+	6b-c	Fe	2	3	Nail frags (general purpose)	Nail		
5197		27	Well 5196	F9 sump/well	325+	6b-c	Fe	1	5	?tapering tool blade? 52mm+ long, section 8x3mm tapering	Tool		
5198			Well 5058	F9 sump/well	370+	6c	Fe	1	2	Nail frag (general purpose)	Nail		
5198	592		Well 5058	F9 sump/well	370+	6c	Fe	1	5	Nail frag (general purpose)	Nail		
5198		44	Well 5058	F9 sump/well	370+	6c	Fe	18	43	Most totally mineralised - nail frags (general purpose)	Nail		Blue frit? 31g
5198	550		Well 5058	F9 sump/well	370+	6c	Fe	2	4	Nail frags (general purpose)	Nail		
5200			Pit 5156	F10 large pit	370-420	6c	Fe	1	14	Nail frag (general purpose)	Nail		
5201			PH08 pipe 5202	F4 building	325-420	6c	Fe	4	34	Nail frags (general purpose)	Nail		
5201		32	PH08 pipe 5202	F4 building	325-420	6c	Fe	9	40	Nail frags (general purpose)	Nail		
5201		32	PH08 pipe 5202	F4 building	325-420	6c	Fe	1	2	Hobnail (too corroded)	Dress		
5203			PH 5131	F4 building	?	RB	Fe	2	27	Nail frags (general purpose)	Nail		
5204			Ditch 5205	F1 central ditch	70-150	4	Fe	1	21	Nail frag (general purpose)	Nail		
5206			Ditch 5207	F3 ditch W corner	350-420	6c	Fe	1	7	Nail frag (general purpose)	Nail		

Cntxt	SF No	Δ No	Parent	Feature /Group	Date	Period	Metal	No	Wt (g)	Description	Type	Object Period	Recommend /comments
5210			Ditch 5211	F1 central ditch	70-250	4	Fe	2	21	Nail frags (general purpose)	Nail		
5212		29	Well 5154	F9 sump/well	370+	6c	Fe	12	44	Most totally mineralised - nail frags (general purpose)	Nail		Blue frit? 4g
5216		35	PH 5135	F4 building	?	RB	Fe	6	30	Nail frags (general purpose)	Nail		
5216		35	PH 5135	F4 building	?	RB	Fe	1	21	Nail (general purpose) 52mm long, 15mm di head	Nail		
5217		36	PH11 pipe 5137	F4 building		RB	Fe	7	44	Nail frags (general purpose)	Nail		
5217		36	PH11 pipe 5137	F4 building		RB	Fe	1	2	Hobnail (too corroded)	Dress		
5223		37	PH08 pipe 5202	F4 building		RB	Fe	3	21	Nail frags (general purpose)	Nail		
5223		37	PH08 pipe 5202	F4 building		RB	Fe	1	3	Hobnail 17mm long, 15mm di head	Dress		
5225		50	Well 5056	F9 sump/well	370+	6c	Fe	5	10	Nail frags (general purpose)	Nail		
5225		50	Well 5056	F9 sump/well	370+	6c	Fe	1	1	Hobnail 15mm long, 6mm di head	Dress		
5225	543		Well 5056	F9 sump/well	370+	6c	Cu al	1	1	Finger ring. Plain D-sectioned adjustable band. 15-18mm di	Dress		
5226		40	Well 5056	F9 sump/well	300-370	6b-c	Fe	10	21	Nail frags (general purpose)	Nail		
5226		40	Well 5056	F9 sump/well	300-370	6b-c	Fe	1	1	Hobnail 14mm long, 10mm di head	Dress		
5226	593		Well 5056	F9 sump/well	300-370	6b-c	Fe	1	2	Nail (general purpose) 53mm long, 6mm di head	Nail		Blue frit? 3g
5231			PH13 pipe 5232	F4 building	270-350	6	Fe	3	26	Nail frags (general purpose)	Nail		
5231			PH13 pipe 5232	F4 building	270-350	6	Fe	1	9	Amorphous lump	Misc		
5235			PH 5236	F11A postholes	?	RB	Fe	17	197	Nail frags (general purpose)	Nail		
5235			PH 5236	F11A postholes	?	RB	Fe	3	100	Large nail frags	Nail		

Cntxt	SF No	Δ No	Parent	Feature /Group	Date	Period	Metal	No	Wt (g)	Description	Type	Object Period	Recommend /comments
5241		48	PH06 pipe 5242	F4 building		RB	Fe	1	1	Nail frag (general purpose)	Nail		
5241		48	PH06 pipe 5242	F4 building		RB	Fe	2	4	Hobnails (too corroded for dimensions)	Dress		
5245		42	PH04 pipe 5246	F4 building	300-400	6b-c	Fe	31	186	Nail frags (general purpose)	Nail		
5245		42	PH04 pipe 5246	F4 building	300-400	6b-c	Fe	1	40	Large nail frag (or bolt)	Nail		
5247		43	PH07 pipe 5129	F4 building		RB	Fe	4	17	Nail frags (general purpose)	Nail		
5247		43	PH07 pipe 5129	F4 building		RB	Fe	1	18	Nail (general purpose) 75mm long, 20mm di head	Nail		
5247		43	PH07 pipe 5129	F4 building		RB	Fe	2	4	Hobnails 15mm long, 12mm di head; 20mm long, 10mm di head	Dress		
5248		49	PH04 pipe 5246	F4 building	270-400	6b-c	Fe	9	43	Nail frags (general purpose)	Nail		
5249		45	PH12 pipe 5250	F4 building		RB	Fe	3	9	Nail frags (general purpose)	Nail		
5251			PH1 5117	F4 building	180-250	5	Fe	9	78	Nail frags (general purpose)	Nail		
5251			PH1 5117	F4 building	180-250	5	Fe	1	4	Hobnail (too corroded)	Dress		
5261			PH1 5117	F4 building	250-350	6	Fe	6	52	Nail frags (general purpose)	Nail		
5261			PH1 5117	F4 building	250-350	6	Fe	1	54	Large nail/bolt frag. 25mm di head	Nail		
5261		53	PH1 5117	F4 building	250-350	6	Fe	4	22	Nail frags (general purpose)	Nail		
5261		53	PH1 5117	F4 building	250-350	6	Fe	1	1	Hobnail 13mm long, 9mm di head	Dress		
5262		52	PH1 pipe 5266	F4 building	270-400	6	Fe	9	43	Nail frags (general purpose)	Nail		
5262		52	PH1 pipe 5266	F4 building	270-400	6	Fe	1	2	Hobnail 19mm long, 9mm di head	Dress		

Cntxt	SF No	Δ No	Parent	Feature /Group	Date	Period	Metal	No	Wt (g)	Description	Type	Object Period	Recommend /comments
5263		54	PH1 5117	F4 building	300-370	6	Fe	1	3	Nail frag (general purpose)	Nail		
5264			PH1 5117	F4 building	150-270	5-6	Fe	7	65	Nail frags (general purpose)	Nail		
5264			PH1 5117	F4 building	150-270	5-6	Fe	2	73	Large nail frags	Nail		
5264		?	PH1 5117	F4 building	150-270	5-6	Fe	2	9	Nail frags (general purpose)	Nail		
5068	508					U/S	Pb	1	3	Irreg 2mm thick sheeting	Waste		
?	585					U/S	Pb	1	2	Token. Uniface, 1.5mm thick, 15mm di. Central dot within ring, further dots around	Coin		See 16.5.3 D. Rudling assessment
?	591					U/S	Pb	1	1	Seal (cloth/fertilizer). 12.5mm dia with lug (broken). Uniface. Two lions below crown	Cloth	M/PM	See 16.5.3 D. Rudling assessment
?	554					U/S	Cu al	2	1	Sheet 0.5mm thick	Waste		
Ex site MD						U/S	Cu al	1	16	?Heavy steelyard arm frag with hooked knob terminal. 50mm+ long, 8mm di. Similar to amulet from Colchester No. 4288 and hattatt 1989 No. 171 steelyard	Weight	RB	More research
Ex site MD						U/S	Cu al	1	4	Trumpet brooch frag with spring and part of pin (broken bow). Cf Hattatt 1989, No. 954 C1st-2nd	Dress	RB	
Field DC4	571					U/S	Cu al	1	3	Enamelled zoomorphic brooch in shape of a hound. Missing pin.	Dress	RB	More research?
Field DC4	574					U/S	Pb	1	283	Conical weight with suspension loop at top and x2 vertically ?drilled holes near edges. 44mm di base, 43mm tall. All perforations 6mm di	Weight		

Cntxt	SF No	Δ No	Parent	Feature /Group	Date	Period	Metal	No	Wt (g)	Description	Type	Object Period	Recommend /comments
Spoil	582					U/S	Ag Silver	1	0.6	Silver ring bezel inscibed with [V]TER [F]ELIX [good luck] (Richard Hobbs BM)	Dress	LRB 4thC	
Spoil	587					U/S	Pb	1	3	Seal 14-15mm dia 2mm thick. Uniface. Quadruped design. Cast	Cloth	Post-med	See 16.5.3 D. Rudling assessment
Spoil	588					U/S	Pb	1	5	Spindle whorl? 1.4mm thick disc, 21mm di with central 3.5mm di central perforation	Cloth		
Spoil	589					U/S	Cu al	1	26	Large key head			
Spoil	590					U/S	Cu al	1	4	Thin decorated strip with 2 loops	Dress?		
Spoil MD	519					U/S	Pb	1	18	Toy soldier (missing head, lower right arm and feet) Pack on back, German made	Toy	LPM L.19thC	pers com James Opie
U/S						U/S	Fe	4	43	Nail frags (general purpose)	Nail	?	
U/S						U/S	Fe	2	27	Too corroded to see form	Misc	?	
U/S						U/S	Cu al	1	11	?Pin (fe) with spherical cu al head c. 13mm di. Much adhering corrosion	Dress		
Spoil	523					U/S	Pewter	1	2	Tombac military button with '88' below ?crown	Military	LPM	
Spoil	522					U/S	Pb	1	43	Spindle whorl. Low-profile 30-31mm di disc, 9mm thick with 9.7mm di central perforation	Cloth		
Spoil	521					U/S	Pb	1	20	Slightly flattened musket shot (fired) c. 15mm di	Military	LPM	
Spoil	520					U/S	Cu al	1	9	Spur fragment	Horse		
TQ4293 1452			Field MD			U/S	Fe	1	14	Nail (general purpose). 78mm long, 11mm di head	Nail	?	
Trench backfill	5104					U/S	Pb	1	2	Elongated droplet	Waste	?	

Cntxt	SF No	Δ No	Parent	Feature /Group	Date	Period	Metal	No	Wt (g)	Description	Type	Object Period	Recommend /comments
Trench backfill	5103					U/S	Pb	1	51	Irregular molten	Waste	?	
Trench backfill	5102					U/S	Pb	1	23	Sheet ott-cut (folded in half). 30mm wide, 1.8mm thick	Waste	?	
Trench backfill	5101					U/S	Pb	1	83	Poss weight. Sheet (6mm thick) partially rolled to form ?net weight. 70mm long, 12mm high	Weight	?	
Trench backfill	596					U/S	Pb	1	3	Cast Lead Token design indistinct 16mm dia	Token	?	See 16.5.3 D. Rudling assessment
Trench backfill	599					U/S	Pb	1	12	?Weight. Roughly spherical ball with central piercing. 13.8mm di, 2.5mm di piercing. 13mm tall. V corroded. Fishing?	Weight	?	
Trench backfill	597					U/S	Pb	1	79	Cast lead trade weight 35.4-38.9mm dia, 7-8mm thick	Weight	Post-med?	See 16.5.3 D. Rudling assessment
Trench backfill	5100					U/S	Cu al	1	20	L-shaped molten runnel. Plano-convex section	Waste	?	

16.3.3: Supplemental assessment of 5 lead artefacts from the 2014 excavation and previous metal detecting at Bridge Farm, Barcombe by Dr David Rudling

Introduction

The Following 5 lead artefacts were submitted for further research by Luke Barber.

The Catalogue

SF 5.85. A 'circular' (15.4-16.4 mm diameter) cast uniface lead token. Weight: 2.19 g. The decorated upper surface has a central raised pellet within a raised circle. The outer border contains a further 10 raised pellets. Uncertain dating.
Context: unstratified (spoil heap).

SF 5.87. Part of a lead cloth or bag seal. A circular (15-16 mm diameter) disc with the edge of a connecting strip. The upper surface has a pattern comprising a quadruped (?horse) standing right, with an unidentified rod-like motif above, sloping from 10 to 1 o'clock. Probably post-medieval.
Context: unstratified (spoil heap).

SF 5.91. Part of a lead cloth seal. A circular (12.6 – 13.7 mm diameter) disc with the upper surface bearing a design consisting of two passant guardant lions walking left with their right fore paws raised, crown above, all within a pellet circle. Lead cloth seals, which were 'attached to individual cloths as part of a system of industrial regulation and quality control', were used in England from 'at least the late 14th to the early 19th centuries' (Egan 1994, vii and 1). They were originally produced to confirm quality control and inspection by an alnager (an officer of the Crown), but later, as in this case, they also functioned to confirm that tax on the wool had been paid to the Crown. Emma Prideaux, the conservator at the Institute of Archaeology (UCL) who cleaned and researched this find, noted that it was of a type of cloth seal consisting of more than two parts and had a three [uncommon] or four-disc strip. She further noted that according to Egan (1994, 5) such disc strips were uncommon until the late 16th century.
Context: unstratified (surface metal detecting of field DC4)

SF 5.96. A circular (16-17 mm diameter) uniface lead token (or possibly part of a seal). Weight: 3.2 g. The upper surface has traces of an indistinct linear design.
Context: unstratified (backfilling). Uncertain dating.

SF 5.97.A circular (35.4-38.9 mm diameter) cast lead disc. Thickness: 8 mm. Weight: 78 g. No apparent decoration or stamps are visible in the photographs submitted to the writer (it should be noted however that the photographs were taken of an uncleaned artefact). Possibly a 3 ounce trade weight (if so the correct weight should be 84 g.). Probably post-medieval.
Context: unstratified (backfilling).

Discussion

The five lead or lead-alloy artefacts found in 2014 are all likely to be medieval or post-medieval in date. It should be noted that six medieval/early post-medieval and one Georgian coin had previously been recovered from this field during survey and metal detecting by Mr David Cunningham. A further two Georgian copper coins were found in 2014.

Reference: Egan, G. 1994. *Lead Cloth Seals and Related Items in the British Museum*. British Museum Occasional Paper 93. London: The British Museum.

16.4.1: An assessment of the coins from the 2014 excavation and previous metal detecting at Bridge Farm, Barcombe by Dr David Rudling

Introduction

Bridge Farm had for many years been metal detected by Mr David Cunningham, a local metal detector user. David's searches had revealed much metalwork of all periods and included many coins. During 2013 the writer produced a report on the finds from Five Acres to assess in advance of further fieldwork both the coins from the December 2012 archaeological survey and all those previously found by David Cunningham. A key aim of the coin assessment was to assist in dating periods of activity at Bridge Farm, and to give some indications as to the intensity of that activity in different fields/areas and the archaeological potential and importance of these areas.

Twenty-two Roman coins and two English post-medieval coins were recovered during the excavations in 2014. Unfortunately, all but 4 of the coins have been misplaced and this report is thus largely based on the project's Special Finds record sheets with initial descriptions and identifications, recordings of weights and diameters, and photographs, all undertaken prior to any major cleaning or conservation. A full Catalogue has been produced and is included below. Further examination and cleaning of the missing coins when/if they are relocated may lead to some changes to descriptions, identifications, etc.

David Cunningham's Coins from Five Acres

A total of 19 coins were found in this field prior to excavation. The 12 Roman coins comprise a denarius of Galba (AD 68-9), a sestertius of Antoninus Pius (AD 138-161), a sestertius of Gordian III (AD 238-244), an illegible 1st-early 3rd century sestertius, three 1st-early 3rd century asses/dupondii, an antoninianus of Gallienus (sole reign: AD 260-68), bronze coins of Constantine II as Caesar (GLORIA EXERCITVS type, 2 soldiers and 2 standards: AD 330-335), Constans (VICTORIAE DD AVGG Q NN, two Victories type: AD 347-8) and the House of Valentinian (SECVRITAS REIPVBLICAE, Victory walking left type: AD 364-78), and an unclipped silver siliqua of Gratian (VOT/VX/MVLT/XX in wreath type: AD 375-83). This group of coins, from due west of the main settlement but in an area with intense geophysical survey anomalies, considerably increases the overall date range for the wider site at Bridge Farm, starting with an issue of Galba in the 1st century and ending with a coin of Gratian in the late 4th century. The fact that the siliqua of Gratian is unclipped and in very good condition with few signs of wear, shows that it was probably lost before c. AD 390.

Five Acres also yielded six medieval/early post-medieval coins: an Edward I/II (1279-1327) silver penny of Canterbury; part of another, but probably later, silver penny; a silver groat (4d) of London issued by Edward IV (first reign: 1461-70); a silver halfgroat (2d) of Elizabeth I (fifth issue: 1582-1600); and two silver halfgroats of James I (1604-19). The reason for this concentration of medieval and early post-medieval coinage is unknown, perhaps a previously unrecorded site or a river crossing? Another find was a copper penny of George III dated 1806.

Coins from the Excavations in Five Acres in 2014

Only 8 of the 22 Roman coins recovered in 2014 were discovered during actual excavation work, the others having been found with the use of a metal detector, mainly from the spoil heaps but also in four cases during metal detecting in the wider field beyond the excavations (these four coins included two Diva Faustina issues of c. AD 141-161).

Overall, the Roman coin assemblage of 2014 is similar in composition to earlier discoveries in the same field. One difference is that there was no coin which need date to the 1st or early 2nd century (previous discoveries included a denarius of Galba dating to AD 68-9). The 1st-early 3rd century generally however is again represented by various possible but illegible Ae coins, and this time identifiable issues dating to the period c. AD 140 to AD 190 (three Ae coins of Faustina Senior (AD 139-161), one of Faustina Junior (AD 146-175), two coins of Lucius Verus (AD 161-9), and a base/once plated denarius of Commodus: AD 177-192). Whilst some of the coins just mentioned may have continued in circulation during the first half of the 3rd century, there is perhaps a surprising absence of coins which can definitely be attributed to this period (the Cunningham coins included a sestertius of Gordian III: AD 238-244). Even more surprising is the fact that there are only two radiate antoniniani coins (both barbarous issues of c. AD 270-85). This compares with a single antoninianus of Gallienus (AD 260-8) found by David Cunningham. Normally both regular and irregular coins of this type are very common coins. There is then a gap in the coin sequence, as with the Cunningham coins, until the 330s/40s, another time of often prolific coin use/loss. Identifiable coin types include: Constantine II as Caesar (GLORIA EXERCITVS type, two soldiers and two standards: AD 333-4) and Constans as Augustus (VICTORIAE DD AVGG Q NN, two Victories: AD 347-8) (both types were also found by David Cunningham). The 2014 coin assemblage ends with two barbarous issues of the House of Constantine (FEL TEMP REPARATIO, soldier spearing a fallen horseman: c. AD 350-60). It thus lacks any coins of the House of Valentinian which is represented by two coins in the Cunningham collection (a bronze SECVRITAS REIPVBLICAE issue of c. AD 364-378, and an unclipped silver siliqua of Gratian: AD 375-383).

The stratified coins from the excavations include a commemorative Divus sestertius of Verus (c. AD 169) from the top of the large pit at the NW baulk. Given the worn condition of this coin it could have remained in circulation until the mid-3rd century, after which such coins ceased to be issued or used. Four coins were also recovered from the lower fills of the well (F009), two being found during wet sieving/flotation of soil samples. These coins include an illegible Barbarous Radiate of c. AD 270-285 (context 5212), a coin of Constantine II as Caesar, GLORIA EXERCITVS: AD 333-4 (context 5212), a barbarous copy of a House of Constantine FEL TEMP REPARATIO, soldier spearing a fallen horseman, coin of c. AD 350-360 (context 5198), and another unidentified mid-4th century bronze coin (context 5198). The dating range of these four coins, c. AD 270-360, compares favourably with the dating of the pottery assemblage from the waterlogged lowest fill of the well/pit which Malcolm Lyne gives as c. AD 300-370+.

The two Georgian copper coins found in 2014 are both close in date (1770-5 and 1806 or 1807) to that of the previously found copper penny of George III (1806).

16.4.2: A catalogue of the coins from the 2014 excavation and previous metal detecting at Bridge Farm, Barcombe by Dr David Rudling

Roman

1. Faustina Senior (I), wife of Antoninus Pius. Given the title Augusta in AD 139. Probably a commemorative 'Diva' issue minted between AD 141 and AD 161 by Antoninus after Faustina's death in AD 141. Ae sestertius. 30mm.
Obverse: Legend illegible, bust right.
Reverse: [ ]??O, S-C to left and right in field, female figure standing left, right arm extended.
Context: unstratified (spoil heap). **SF 5.01.**

2. Diva Faustina Senior. Struck c. AD 141-161. Ae as or dupondius. 28mm.
Obverse: DIVA FAUSTINA, bust right.
Reverse: AVGVSTA, S-C to left and right in field, Ceres, veiled, standing left, holding two corn ears downwards in right hand, and long torch, vertical, in left hand.
Reference: RIC 1169. Context: unstratified (metal detecting). **SF 5.70.**

3. Diva Faustina Senior. Struck c. AD 141-161. Ae as or dupondius. 25.5mm.
Obverse: DIVA FAVST[INA], draped and veiled bust right.
Reverse: A[ETERNITA]S, S-C to left and right low in field, female figure standing left.
Context: unstratified (metal detecting). **SF 5.81.**

4. Probably Faustina Junior (II), daughter of Antoninus Pius and wife of Marcus Aurelius. Given the tile Augusta in AD 146 and died in AD 175. Ae As or dupondius. 25mm. Illegible.
Obverse: ? Bust right, hair coiled on back of head. Reverse: Illegible/eroded.
Context: unstratified (metal detecting). **SF 5.107.**

5. Lucius Verus, AD 161-169. Large fragment of an Ae sestertius. Issued: AD 161-162.
Obverse: IMP CAES L AVRE[L VER]VS AVG, laureate bust right.
Reverse: FORT RED (in exergue), [TR POT II] COS II, S-C to left and right in field, Fortuna seated left holding rudder and cornucopiae.
Reference: RIC 1320. Context: 5000 (trench surface). **SF 5.07.**

6. Lucius Verus. Commemorative issue by Marcus Aurelius after the death of Verus, his former co-emperor, in AD 169. Ae sestertius. 30mm.
Obverse: DIVVS [V]ER[VS], bare head right.
Reverse: [CONSECRATIO], S-C to left and right in field, eagle standing right on globe, with head turned left, and wings open.
Reference: RIC 1509. Context: 5111 (fill of large pit at NW baulk). **SF 5.14.**

7. Commodus, as sole emperor, AD 177-192. Ae (base) core of an originally silver-plated denarius; a contemporary copy of an official coin.
Obverse: [M C]OMM ANT P [FEL AVG BRIT or BRIT P P], laureate bust right.
Reverse: Illegible legends, uncertain standing figure.
Context: unstratified (spoil heap). **SF 5.04**.

8. Mid. 2nd-early 3rd century. Fragment of a silver denarius. Illegible.
Obverse: Laureate bust right. Reverse: female figure standing left.
Context: unstratified (spoil heap**). SF 5.24.**

9. 2nd-early 3rd century. Ae 18mm centre of an as or dupondius with outer legends lost/eroded. A possible light weight cast (Limes falsa type) copy?
Obverse: Bearded bust right. Reverse: Figure standing left, S-C to left and right in field.
Context: unstratified (metal detecting). **SF 108.**

10. 1st-early 3rd century. Ae as or dupondius. 25mm. Illegible. Context 5000 (trench surface). **SF 5.02.**

11. 1st-early 3rd century. Ae as or dupondius. 25.5mm. Illegible. Context: unstratified (spoil heap). **SF 5.03.**

12. Probably 1st-early 3rd century. Fragment of an Ae coin c. 25mm in diameter, perhaps an as or dupondius. Illegible.
Context: unstratified (spoil heap). **SF 5.25.**
13. Barbarous Radiate. Ae 17mm copy of an antoninianus of Tetricus I (AD 271-4). Circa. AD 271-285.
Obverse: [IMP C T]ETRICVS P F AVG, radiate bust right.
Reverse: Illegible, Salus standing left, feeding snake from outstretched right hand, left hand holding a branch.
Context: unstratified (metal detecting). **SF 5.73.**
14. Barbarous Radiate. Ae 10.3mm. Illegible. Circa. AD 270-285.
Obverse: Radiate head right. Reverse: figure standing left? Context: 5212, a fill of the well (F009). **SF 5.106.**
15. Constantine II, as Caesar. Ae 17mm. Minted at Arles in France in AD 333-4.
Obverse: CONSTANTI-NVS IVN NC, laureate and cuirassed bust right.
Reverse: GLORIA EXERCITVS, two soldiers standing either side of two standards. Mint-marks: PCONST (in exergue) and wreath with dot in field between the standards.
Reference: RIC (Arles) 376. Context: 5212, a fill of the well (F009). **SF 5.37.**
16. House of Constantine. Mid-4th century. Largely illegible Ae 15mm. Minted at Lyons in France in AD 330-1.
Obverse: Bust right. Reverse: uncertain type. Mint-mark: •PLG
Context: 5198, a fill of the well (F009). **SF 5.49.**
17. Constans, as Augustus, AD 337-350. Ae 14mm. Minted at Trier, Germany in AD 347-8.
Obverse: CONSTAN-[S P F] AVG, draped and cuirassed bust right, rosette-diademed.
Reverse: VICTORIAE D[D AVGG Q NN], two victories standing facing each other, each holding a wreath. Mint-marks: [TRP] in exergue; D in field between the two victories.
Reference: RIC (Trier) 195. Context: unstratified (metal detecting). **SF 110.**
18. Barbarous Ae 14mm imitation of a Constantius II Fel Temp Reparatio Fallen Horseman type coin, c. AD 350-60.
Obverse: [CONSTAN]-TIVS P F AVG, bust right.
Reverse: [FEL] TEMP [REPARATIO], soldier standing left, spearing fallen horseman who has one arm raised.
Context: unstratified (metal detecting). **SF 109.**
19. House of Constantine. Mid-4th century, c. AD 350-360. Illegible Ae 11mm. Barbarous imitation.
Obverse: Lettering illegible, diademed bust right.
Reverse: Possibly a soldier advancing left, spearing fallen horseman. (ie another copy of the Fel Temp Reparatio Fallen Horseman types).
Context: 5198, a fill of the well (F009). **SF 5.55.**
20. Late 3rd or 4th century. Ae 17mm. Illegible. Context: unstratified (spoil heap). **SF 5.05.**
21. Late 3rd or 4th century. Ae 15mm. Illegible. Context: unstratified (spoil heap). **SF 5.06.**
22. Fourth century. Ae 11mm. Illegible.
Obverse: Head right. Reverse: Figure standing left. Context: unstratified (metal detecting). **SF 5.72.**

Kings of England
1. George III. Copper halfpenny. First issue, 1770-1775. Date illegible. This could be a contemporary forgery.
Context: unstratified (spoil heap). **SF 5.26.**
2. George III. Copper farthing. Fourth issue, 1806 or 1807. Date illegible.
Context: unstratified (spoil heap). **SF 5.27.**

16.9.1: An assessment of the glass fragments from BF14 by Luke Barber

The 2014 excavations recovered 111 pieces of glass, weighing 192g, from 32 individually numbered contexts. These totals, which are slightly higher than the 2013 quantities, include 36 pieces (27g) from 17 environmental residues. On the whole the material is in good condition, exhibiting no or negligible surface corrosion. This is almost certainly the result of the fact that virtually the whole assemblage appears to be of Roman date and thus of good quality manufacture. Although most pieces are quite fresh in appearance, a few are slightly abraded, suggesting some at least have been subjected to reworking. Typically for a Roman assemblage, at 1.7g, the average size of glass shard is very small and similar to the average of 1.9g from the 2013 excavations. The only definite post-Roman pieces consist of five shards (32g) from cleaning [5000] that are from 18th- to 19th- century beer/wine bottles though a few other tiny chips could be of similar date. Overall, 39 pieces (118g) were recovered from unstratified/topsoil deposits with the remainder being recovered from deposits dated to the Roman period.

The assemblage has been fully listed on pro forma during this assessment with this data being used to create an excel spreadsheet as part of the digital archive. Due to the lack of large pieces most fragments can only be allocated a very general form and close dating is virtually impossible. The assemblage has been characterised in Table 1.

Context period/ type	**Unstratified & unphased**	**Roman Period 4-5 (C1st-2nd)**	**Roman Period 6 (C3rd – 4th)**
No. contexts	*7*	*2*	*23*
Uncertain form	1/1g (colourless) 1/1g (olive green) 1/10g (blue-green)	1/1g (aqua)	3/3g (colourless) 5/3g (pale green) 2/2g (blue-green)
Uncertain form (cylindrical)	4/7g (colourless) 6/7g (blue-green) 1/1g (aqua) 3/2g (pale green)	-	13/8g (colourless) 15/10g (pale green) 2/6g (blue-green) 2/2g (aqua)
Bead	1/1g (green)	-	1/1g (amber)
Bottle (square/cylindrical)	11/46g (blue-green) 3/2g (pale green) 5/32g (dark green)	1/1g (aqua)	1/1g (pale green) 4/5g (blue-green) 3/10g (aqua)
Bowls and other forms	-	-	5/5g (colourless) 2/3g (pale green) 1/1 (blue-green) 2/1g (aqua)
Window	6/12g (aqua)	-	2/2g (colourless) 1/2g (pale green) 2/3g (aqua)
Totals	**43/122g**	**2/2g**	**66/68g**

Table 1: Characterisation of glass assemblage by spot dated context, form and colour.

As can be seen from Table 1 nearly the whole assemblage was recovered from Late Roman deposits, though there are many that currently defy phasing. The range of colour shades and forms is not unusual for the Roman period and most would be in keeping with the mid/later Roman period. Very few feature shards are present but, quite typically bottles, both square and cylindrical, are the most common recognisable forms. Decoration is very sparse. A 1g fragment from a colourless cylindrical vessel has

traces of etched lattice decoration (cleaning [5000]) and two pieces (2g) from another colourless cylindrical vessel, probably a cup or bowl, have embossed knobs (tooled point) decoration (ditch [5021], fill [5020], F3 ditch). This decorative type is typical of the 3rd century. Fineware forms include a scatter of bowl, jug and beaker fragments, including a probable bowl shard in blue-green glass with a diameter of *c.* 160mm and thickened everted rim (post-hole [5123], fill [5122], PH04. F4 building). There is also a 2g fragment from the kicked base of a small unguent bottle in pale green glass (pit [5156], fill [5167], F10 pit).

The 2014 excavations recovered two beads, one less than the 2013 ones. These may well be losses rather than material for recycling. The pieces consist of a 4mm long by 3mm diameter green example (unstratified) and a 4.8mm long, 3.4mm diameter example in amber glass (post-hole [5119], fill [5118], F4 building).

Although glass is a frequent find on Roman sites of all levels of society the presence of window fragments, as in the earlier excavations, clearly indicates the presence of a building of some standing. Both matt-gloss and gloss-gloss window glass is present demonstrating a wide chronological span. Where this building stood is uncertain – although it could have been the excavated post-built structure it is thought unlikely as a piece of matt-gloss glass was recovered from one of its post-holes (cut [5233], PH 13). Indeed, six of the post-holes forming the F4 building produced a combined total of 21 pieces (29g) of glass, including the bead, window glass and various different vessels. Post-hole [5119] (PH02) produced a melted piece of glass waste. Although two of these post-holes only produced glass from their post-pipes, the remainder did so from the construction backfill.

Although the current assemblage of glass contains far more Late Roman material than the 2013 assemblage its interpretation remains the same. It is suspected that the current settlement acted as a collection point for cullet, either to be re-melted on-site or, transported elsewhere for recycling. The fact the glass was recovered from virtually all features demonstrates the wide nature of its distribution. The assemblage can therefore be viewed as a scatter of material for recycling that was collected from an unknown number of households, potentially spread over quite an area, both within the Bridge Farm settlement and further afield.

Potential

The glass assemblage is not considered to hold significant potential for further analysis beyond that undertaken for this assessment. The presence of a low-level scatter of glass is not unusual on Roman sites and, in the absence of definite part-processed recycled material, does not offer any particular insights into the activities or status of the site's occupants. All pieces are very small with the vast majority not diagnostic of exact form. The presence of the beads and window glass is of a little more interest as they suggest something of the population and presence of a high-status building in the area.

As such it is proposed to produce a summary of the glass for publication without undertaking any further detailed analysis work at this stage. The majority of this summary will be extracted from the above assessment text and no pieces are proposed for illustration.

16.9.2: Catalogue of the glass fragments by Luke Barber

Context	SF No	Parent	Feature	Date	Phase	Form	Colour	No	Wt gms	Thick mm	Corros'n	Dimensions /markings / embossing / comments
U/S					u/s	?Square bottle	Blue/green	1	1	1.3mm	None	
U/S					u/s	Bead	Green	1	1	n/a	None	Cylindrical 4mm long, 3mm dia. C. 1mm longitudinal perforation
Backfill	598				u/s	Waste	Blue/green	1	10	n/a	None	Molten - plano-convex surfaces
5000		cleaning	n/a	u/s	n/a	?Square bottle	Blue/green	10	45	3-4mm	None	
5000		cleaning	n/a	u/s	n/a	Cylindrical	Blue/green	5	5	2-3.5mm	None	Cylindrical bottles?
5000		cleaning	n/a	u/s	n/a	Cylindrical	Blue/green	1	2	0.8mm	None	c. 160mm di bulbous club rim. Bowl
5000		cleaning	n/a	u/s	n/a	Cylindrical	Colourless	1	4	1.3mm	None	
5000		cleaning	n/a	u/s	n/a	?Square bottle	Pale green	3	2	1.6mm	None	
5000		cleaning	n/a	u/s	n/a	Cylindrical	Pale green	3	2	1mm	None	
5000		cleaning	n/a	u/s	n/a	Window	Aqua	6	12	1.7-3mm	None	x1 melted. RB/LPM?
5000		cleaning	n/a	u/s	n/a	Cylindrical	Colourless	1	1	1.7mm	None	Etched lattice
5000		cleaning	n/a	u/s	n/a	Beer/wine bottle	Dark green	5	32	?	None	LPM C18th/19th
5000	583	cleaning	n/a	u/s	n/a	Waste	Olive green	1	1	n/a	None	Sperical droplet c. 19mm di. Slaggy
5003		PH13 5233	F4 building	250-375	6	Window	Pale green	1	2	2.4mm	None	Matt-gloss
5013		Ditch 5014	F3 ditch W corner	375-425	6c	Window	Aqua	1	1	3.3mm	None	Gloss. Poss LPM
5013		Ditch 5014 Δ4	F3 ditch W corner	375-425	6c	Window	Aqua	1	2	3mm	None	Gloss. Poss LPM

Context	SF No	Parent	Feature	Date	Phase	Form	Colour	No	Wt gms	Thick mm	Corros'n	Dimensions /markings / embossing / comments
5013		Ditch 5014 Δ4	F3 ditch W corner	375-425	6c	Window	Colourless	1	1	2mm	None	Date?
5017		Hearth 5173 Δ1	F2 banjo hearth	150-250	5	?	Aqua	1	1	?	None	Tiny chip Poss LPM
5020	529	Ditch 5021	F3 ditch W corner	200-410	6	Cylindrical	Colourless	2	2	1mm	None	Embossed knobs: Tooled point decoration. Cup or bowl. C3rd
5053		Hearth 5054	F7 forging hearth	325-420	6c	Square bottle	Blue/green	1	1	4.1mm	None	
5053		Hearth 5054	F7 forging hearth	325-420	6c	Square bottle	Aqua	1	2	5.9mm	None	Base. Circular ring embosiing on base
5059		PH 5060	G3 W corner	Res	n/a	Cylindrical	Colourless	1	1	1.7mm	None	
5063		Well 5056	F9 sump/well	350-410	6c	Bottle/window	Aqua	1	1	1.8mm	None	
5085		Well 5058 Δ7	F9 sump/well	350+	6c	?	Pale green	3	1	?	None	Tiny chips
5085		Well 5058 Δ7	F9 sump/well	350+	6c	Flat	Colourless	1	1	2mm	None	Tiny chips
5094		pit 5095	F10 large pit	370+	6c	?	Blue/green	1	1	5mm	None	Very worn
5094		pit 5095	F10 large pit	370+	6c	Bowl/cup	Pale green	1	1	1.6mm	None	90mm di simple everted rim
5100		ditch 5104	F3 ditch W corner	350-420	6c	Cylindrical bottle	Blue/green	1	1	2.8mm	None	
5100		ditch 5104	F3 ditch W corner	350-420	6c	?Cylindrical bottle	Pale green	1	1	?	None	
5102		pit 5103	F10 large pit	350-420	6c	Cylindrical	Pale green	2	2	1.2 & 2.3mm	None	
5102		pit 5103 Δ44	F10 large pit	350-420	6c	Cylindrical	Colourless	1	1	0.5mm	None	
5107		ditch ?	F3 ditch W corner	350-420	6c	Cylindrical	Pale green	2	1	1mm	None	
5111		pit NW baulk	pit NW baulk	250-300	6a	Cylindrical	Aqua	1	1	1.2mm	None	

Context	SF No	Parent	Feature	Date	Phase	Form	Colour	No	Wt gms	Thick mm	Corros'n	Dimensions /markings / embossing / comments
5111		pit NW baulk	pit NW baulk	250-300	6a	Cylindrical bottle	Blue/green	2	3	4.5mm	None	
5114		ditch 5115	F1 central ditch	70-200	4	Cylindrical bottle	Aqua	1	1	2.7mm	None	Neck
5118	5.11	PH02 5119 Δ10	F4 building	70-370	6	Bead	Amber	1	1	n/a	None	Cylindrical 4.8mm long, 3.4mm di (amber glass)
5118		PH02 5119 Δ10	F4 building	70-370	6	Cylindrical	Colourless	3	1	1.2mm	None	Chips
5118	517	PH02 5119	F4 building	70-370	6	Waste	Pale green	1	1	n/a	None	Molten vitrified droplet (not a bead)
5120		PH03 5121 Δ11	F4 building	130-250	6 res	Cylindrical	Blue/green	1	1	2.7mm	None	
5120		PH03 5121 Δ11	F4 building	130-250	6 res	Cylindrical	Pale green	2	1	?	None	Tiny chips
5122		PH04 5123	F4 building	270-400	6	Cylindrical bottle	Aqua	1	7	5.6-6.6mm	None	
5122		PH04 5123 Δ12	F4 building	270-400	6	Cylindrical	Colourless	1	1	0.3mm	None	Very fine
5122		PH04 5123 Δ12	F4 building	270-400	6	?Bowl	Blue/green	1	1	?	None	Fine bowl. 160mm dia thickened everted rim
5122	518	PH04 5123	F4 building	270-400	6	Cylindrical	Blue/green	1	5	1.8mm	None	
5148		PH03 pipe 5149 Δ24	F4 building	250-350	6b	?	Pale green	1	1	1.2mm	None	
5152		PH09 pipe 5240 Δ30	F4 building			?	Colourless	1	1	1mm	None	
5159		Well 5058	F9 sump/well	370+	6c	?	Blue/green	1	1	4.8mm	None	
5159		Well 5058	F9 sump/well	370+	6c	Cylindrical	Pale green	5	3	1.5-2.2mm	None	

Context	SF No	Parent	Feature	Date	Phase	Form	Colour	No	Wt gms	Thick mm	Corros'n	Dimensions /markings / embossing / comments
5167		Pit 5156	F10 large pit	270-420	6b-c	Phial	Pale green	1	2	2.2mm	None	Kicked base from fine phial/unguent bottle
5167	530	Pit 5156	F10 large pit	270-420	6b-c	Cylindrical	Pale green	1	1	1.1mm	None	x2 light etched horizontal lines
5167		Pit 5156 Δ41	F10 large pit	270-420	6b-c	Cylindrical	Colourless	1	1	1.2mm	None	?
5187		PH 5188 Δ33	F11A postholes			Cylindrical	Aqua	1	1	1.9mm		
5195		Well 5196 Δ26	F9 sump/well	270-420	6c	?	Colourless	1	1	?		Tiny chips
5198		Well 5058 Δ44	F9 sump/well	370+	6c	Cylindrical	Colourless	2	1	0.8mm		
5201		PH08 pipe 5202	F4 building	325-420	6c	Cylindrical	Aqua	1	1	1.2mm		
5201	538	PH08 pipe 5202	F4 building	325-420	6c	Jug	Colourless	5	5	?		Strap handle
5212		Well 5154 Δ29	F9 sump/well	370+	6c	Cylindrical	Colourless	3	1	1.1mm		
5225		Well 5056 Δ50	F9 sump/well	370+	6c	?Beaker	Aqua	2	1	1mm		Base
5225		Well 5056 Δ50	F9 sump/well	370+	6c	Cylindrical	Pale green	2	1	?		
5225		Well 5056 Δ50	F9 sump/well	370+	6c	?	Colourless	1	1	2mm		
5226		Well 5056 Δ40	F9 sump/well	300-370	6b-c	?	Colourless	1	1	1.1mm		
5226		Well 5056 Δ40	F9 sump/well	300-370	6b-c	Cylindrical	Pale green	1	1	2.2mm		
5261		PH1 5265 Δ53	F4 building	325-420	6	Cylindrical	Colourless	1	1	1.8mm		

16.6.1 An assessment of the clay pipe stem fragments from the 2014 excavation at Bridge Farm, Barcombe, East Sussex by Luke Barber

The Clay Tobacco Pipes

The 2014 excavations recovered 29 pieces of clay pipe, weighing 88g, from three individually numbered contexts. The material has been fully summarised in Table 1 as part of the visible archive. With the exception of the intrusive piece in post-hole fill [5003] all of the clay pipe is predictably from unstratified/topsoil deposits. The abraded nature of the pieces is what one may expect from such deposits and it is clear the material has been subjected to repeated reworking.

Context	Element	Likely date range	Bore diameter	No	Weight (gms)	Combined stem length (mm)	Comments
U/S	Stem	1600-1650	3.3mm	2	8	75	Very worn
U/S	Stem	1650-1700	2.6-3.0mm	7	19	220	Very worn
U/S	Stem	1700-1750	2.3-2.4mm	2	7	65	Very worn
5000	Stem	1650-1700	2.5-3.0mm	17	51	559	Very worn
5003	Stem	1650-1700	2.9mm	1	3	40	Quite fresh

Table 1: Clay pipe assemblage

The assemblage consists solely of stem fragments, none of which are decorated or marked. The clay pipe assemblage is slightly unusual in that it contains no pipes of the mid-18th to 19th centuries – usually by far the most common period represented. Instead the pipes suggest some activity in the first half of the 17th century with a marked increase in the second half of the 17th century with a rapid tail off again in the first half of the 18th century. Whether this represents a particular intensive period of labouring on the land, with the pipes being casual breakages and discards by farm labourers, or the result of manuring with domestic waste, or a non-agricultural activity is uncertain.

The clay pipe assemblage is small and is composed of plain stem fragments from mixed deposits. The material is not considered to hold any potential for further analysis beyond that undertaken for this report and does not require publication.

16.7.1: An assessment of the metallurgical remains by Luke Barber

The 2014 excavations recovered considerably more slag than the 2013 work – 2360 pieces, weighing 81,617g, from 110 individually numbered contexts. These totals include just over 10.5kg from 48 environmental residues. All residues were scanned at x10 magnification to establish the presence/absence of micro slags. Due to the small sizes of the pieces involved from the environmental residues they were only quantified by weight. All hand-collected material was quantified by count and weight. The assemblage has been fully listed by context and type on metallurgical pro forma sheets, which are housed with the archive. This data has also been used to create an excel spreadsheet as part of the assessment. The assemblage is characterised in Table 1.

Period	Unstratified	ERB: Phases 4-5	LRB: phases 6-7	No.	Weight
No. contexts	*19*	*16*	*75*		
Iron concretion	160/3320g	18/1034g	812/9122g	**990**	**13,476g**
Magnetic Fines	379g	413g	6665g		**7457g**
Fuel ash slag	9/150g	2/38g	34/429g	**45**	**617g**
Hearth Lining	18/398g	12/234g	52/788g	**82**	**1420g**
Smelting slag (tap)	2/32g	-	7/706g	**9**	**738g**
Smelting slag	4/802g	1/200g	7/1604g	**12**	**2606g**
Smithing slag (forge bottom)	2/628g	2/748g	-	**4**	**1376g**
Hammerscale	3g	1g	19g		**23g**
Undiagnostic iron slag (dense)	32/3582g	2/452g	18/7186g	**52**	**11,220g**
Undiagnostic iron slag (aerated)	361/10,836g	165/10.622g	639/21,210g	**1165**	**42,668g**
Blast furnace	-	1/16g	-	**1**	**16g**
Totals	**588/20,130g**	**203/13,758g**	**1569/47,729g**		

Table 1: Characterisation of slag assemblage.

The assemblage includes a notable quantity of material that is not really slag at all. The iron concretions are formed from percolating iron oxides washing through the soil profile and forming a concreted layer, often incorporating clasts of flint pebbles and other stone. This material is certainly natural to the floodplain. The magnetic fines consist of granules of ferruginous stone and clay whose magnetic properties have been enhanced through burning. They are a common fine in environmental residues when they are scanned with a magnet. Although the associated burning could relate to metalworking, it could equally be caused by domestic hearths, bonfires and stubble burning. A number of different types of true slag are present in the assemblage, most of which are associated with iron-working. One of the exceptions is the fuel ash slag, a lightweight waste that can be the result of any high temperature process, including domestic hearths. A few of the current pieces have glassy self-vitrified faces but all are of amorphous form. Fuel ash slag is more common in the Late Roman period but this is probably due to the higher number of Late Roman contexts within the excavation. The 82 pieces of hearth/furnace lining usually have heavy vitrification on at least one of their surfaces, frequently in association with undiagnostic iron slag. As such, although some pieces may have derived from kilns (eg for ceramics), most appear to be associated with iron-working. The linings are usually of oxidised silty or sandy clay, though a few reduced examples are also present. The material appears in contexts of all periods and indeed is spread throughout most feature groups. The phase 6c forging hearth (F7) produced just five pieces (148g) and 16 pieces (207g) were recovered from the post-hole fills of the building (F4).

The 2013 excavations interestingly produced a notable quantity of quite fresh tap slag from iron smelting in both Early and Late Roman deposits. In contrast, the current excavations only recovered this material from Late Roman deposits though most pieces are worn and could be residual/reworked waste from Early Roman activity. The material was recovered from a number of different deposits, including post-hole [5233] of the F4 building and well [5058] (F9). Dense iron slag, almost certainly from smelting but without the characteristic 'flow' of tap slag, totalled 12 pieces (2606g). Although one came from Early Roman deposits (phase 5 ditch/pit [5069]) most, where dated, came from Late Roman deposits, including three different post-holes in building F4. Although two of the latter were recovered from the post-pipes that from post-hole [5139] came from the initial backfill. Most of this material is again quite worn and it is suspected the whole definite smelting assemblage is residual though to which century it belongs is uncertain. Unlike the 2013 excavations smithing slag appears to be far more common in the assemblage. Strictly speaking, the forge bottoms and hammerscale are the only properly diagnostic pieces, however, it is strongly suspected that most/all of the undiagnostic iron slag, in both its density groups (though particularly the aerated type), relates to smithing activity. Typically, the slag is dark grey and aerated, occasionally with charcoal inclusions, with a rust-brown exterior. The material is present in both Early and, far more commonly, Later Roman deposits. Of note are the remains of four plano-convex forge bottoms (the same quantity being found in 2013) ranging in diameter from 80 to 105mm and in thickness from 32 to 54mm. The only securely stratified forge bottoms were recovered from phase 4 ditches [5211] and [5113] (F1 central ditch) and phase 5 hearth [5173] (F2). Their presence certainly suggests smithing was occurring in the Early Roman period. The hearth also included 16 pieces of aerated smithing slag (2106g) as well as iron concretions and magnetic fines. The absence of hammerscale from the hearth is notable and it is uncertain if the presence of the slag is actually just residual material rather than definitely being associated with it. An early date for smithing activity would be in keeping with 6445g of probable iron smithing waste being recovered from some 13 of the post-holes associated with building F4. Clearly there was significant quantities of forging waste in the area by the start of the Late Roman period that got accidentally incorporated into cut features. However, given the quantities of smithing waste, including hammerscale, in the phase 6 deposits it is most likely that smithing continued throughout.

The final type of slag consists of an intrusive piece of blast furnace slag of the early post-medieval period. Another piece was recovered from the topsoil in 2013 showing there to be a sparse scatter of this material over the area – probably originally from surfacing tracks during the post-medieval period.

Potential

Although the quantity of slag from the 2014 excavations is notably higher than that from those of 2013 the assemblage is very mixed, both chronologically and spatially. It has confirmed that limited iron smelting was occurring, perhaps in the Early Roman period and that moderate to high levels of iron smithing were occurring throughout the life of the settlement. The waste from this is clearly spread widely and quite thickly across the parts of the site investigated so far. It is suspected that the quantities indicate smithing was undertaken on a semi-industrial/commercial level rather than a domestic one but the assemblages from future investigations should help confirm or refute this suggestion. Overall, the assemblage adds to the view of a semi-industrialised settlement. However, the current assemblage of slag does not warrant any further detailed analysis in its own right though it should be considered against future assemblages from the settlement. As the presence of Roman smelting and smithing slag does shed light on aspects of the site's economy it should be noted in the final report.

Methodology

The full slag archive was completed during this post-excavation assessment and samples of all the different types, together with pieces of more interest, retained for long-term curation in a museum. A summary report should be included in the final publication outlining the slag assemblage and thus the evidence for metalworking in different periods. The publication text can be extracted from the above factual statement.

16.7.1: Catalogue of the metallurgical remains by Luke Barber

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5006	Ditch 5007	F1 central ditch	70-200	4	1a Fuel ash	1	28	
5006	Ditch 5007	F1 central ditch	70-200	4	2a undiagnostic iron (dense)	1	82	
5006	Ditch 5007	F1 central ditch	70-200	4	2b undiagnostic iron (aerated)	6	186	
5006	Ditch 5007	F1 central ditch	70-200	4	2b undiagnostic iron (aerated)	1	212	
5006	Ditch 5007	F1 central ditch	70-200	4	4a Hearth lining	1	32	Reduced silty clay, vitrified
5006	Ditch 5007	F1 central ditch	70-200	4	8a Iron concretion	1	68	
5006	Ditch 5007	F1 central ditch	70-200	4	8a Iron concretion	1	360	
5011	Ditch 5012	F1 central ditch	70-150	4	2b undiagnostic iron (aerated)	27	952	
5011	Ditch 5012	F1 central ditch	70-150	4	2b undiagnostic iron (aerated)	29	868	
5011	Ditch 5012	F1 central ditch	70-150	4	4a Hearth lining	5	126	Dull red
5011	Ditch 5012	F1 central ditch	70-150	4	4a Hearth lining	1	28	Dull red silt clay, vitrified
5011	Ditch 5012	F1 central ditch	70-150	4	8a Iron concretion	4	222	
5011	Ditch 5012	F1 central ditch	70-150	4	8a Iron concretion	3	148	
5047	Ditch 5048	F1 central ditch	70-150	4	2b undiagnostic iron (aerated)	10	928	
5086	Ditch 5087/5101	F1 central ditch	70-200	4	2b undiagnostic iron (aerated)	2	112	
5086	Ditch 5087/5101	F1 central ditch	70-200	4	3b Hammerscale		1	Flakes (<1mm) x25-50, spheres x10-25 (Δ8)
5086	Ditch 5087/5101	F1 central ditch	70-200	4	8a Iron concretion	1	40	
5086	Ditch 5087/5101	F1 central ditch	70-200	4	8b Magnetic fines		19	(Sample 8)
5112	ditch 5113	F1 central ditch			2b undiagnostic iron (aerated)	2	88	

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5112	ditch 5113	F1 central ditch			3a Smithing forge bottom	1	428	Plano-convex. 105 x 80mm, 50mm thick
5204	Ditch 5205	F1 central ditch	70-150	4	2b undiagnostic iron (aerated)	6	1102	
5204	Ditch 5205	F1 central ditch	70-150	4	2b undiagnostic iron (aerated)	3	88	
5210	Ditch 5211	F1 central ditch	70-250	4	2b undiagnostic iron (aerated)	3	122	
5210	Ditch 5211	F1 central ditch	70-250	4	2b undiagnostic iron (aerated)	2	276	
5210	Ditch 5211	F1 central ditch	70-250	4	3a Smithing forge bottom	1	494	Plano-convex. C. 92mm di, 54mm thick
5094	pit 5095	F10 large pit	370+	6c	8a Iron concretion	1	6	
5102	pit 5103	F10 large pit	350-420	6c	1a Fuel ash	1	4	
5102	pit 5103	F10 large pit	350-420	6c	2b undiagnostic iron (aerated)	4	36	
5102	pit 5103	F10 large pit	350-420	6c	3b Hammerscale		1	Flakes (to 1mm) x10-25 (sample 44)
5102	pit 5103	F10 large pit	350-420	6c	4a Hearth lining	1	8	Slightly groggy, b. clay
5102	pit 5103	F10 large pit	350-420	6c	8b Magnetic fines		18	Coarse magnetic (sample 44)
5102	pit 5103	F10 large pit	350-420	6c	8b Magnetic fines		44	Fine magnetic (sample 44)
5155	Pit 5156	F10 large pit	370-420	6c	8a Iron concretion	3	20	
5157	Pit 5158	F10 large pit		6c	8a Iron concretion	16	42	
5167	Pit 5156	F10 large pit	270-420	6b-c	1a Fuel ash	3	26	
5167	Pit 5156	F10 large pit	270-420	6b-c	8a Iron concretion	6	46	
5168	Pit 5158	F10 large pit	370-420	6c	3b Hammerscale		1	Flakes (<1mm) <10 (Δ37)
5169	Pit 5158	F10 large pit	270-420	6b-c	2b undiagnostic iron (aerated)	4	110	
5199	Pit 5095	F10 large pit	370+	6c	2b undiagnostic iron (aerated)	3	84	
5200	Pit 5156	F10 large pit	370-420	6c	2a undiagnostic iron (dense)	1	164	
5200	Pit 5156	F10 large pit	370-420	6c	8a Iron concretion	1	24	
5200	Pit 5156	F10 large pit	370-420	6c	8a Iron concretion	1	12	

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5218	Stake 5219	F10 large pit			8b Magnetic fines		1	(sample 34)
5220	Stake 5221	F10 large pit	240-400	6	8a Iron concretion	1	18	
5179	PH 5180	F11A postholes	150-250	5	2b undiagnostic iron (aerated)	3	1484	
5183	PH 5184	F11A postholes	150-250	5	8a Iron concretion	1	12	
5187	PH 5188	F11A postholes			2b undiagnostic iron (aerated)	1	70	
5187	PH 5188	F11A postholes			8b Magnetic fines		6	(sample 33)
5187	PH 5188	F11A postholes			8b Magnetic fines		50	(sample 38)
5254	PH 5255	F11A postholes			8a Iron concretion	3	44	
5191	PH 5192	F11B postholes	270-420	6b-c	1a Fuel ash	1	14	
5191	PH 5192	F11B postholes	270-420	6b-c	2b undiagnostic iron (aerated)	1	8	
5017	Hearth 5173	F2 banjo hearth	150-250	5	2b undiagnostic iron (aerated)	15	2078	
5017	Hearth 5173	F2 banjo hearth	150-250	5	3a Smithing forge bottom	1	254	Plano-convex. 85mm di, 32mm thick
5017	Hearth 5173	F2 banjo hearth	150-250	5	8b Magnetic fines		262	500+ (Sample1)
5064	Hearth 5173	F2 banjo hearth	70-150	4	2b undiagnostic iron (aerated)	1	28	
5064	Hearth 5173	F2 banjo hearth	70-150	4	8a Iron concretion	2	12	
5064	Hearth 5173	F2 banjo hearth	70-150	4	8b Magnetic fines		92	(sample 6)
5009	Ditch 5010	F3 ditch W corner	270-410	6c	2a Undiagnostic iron (dense)	1	64	
5009	Ditch 5010	F3 ditch W corner	270-410	6c	2b undiagnostic iron (aerated)	29	678	
5009	Ditch 5010	F3 ditch W corner	270-410	6c	8a Iron concretion	2	38	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	1a Fuel ash	1	10	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	1a Fuel ash	1	8	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	1a Fuel ash		1	(sample 4)
5013	Ditch 5014	F3 ditch W corner	375-425	6c	2a Undiagnostic iron (dense)	2	174	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	2a Undiagnostic iron (dense)	1	44	

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5013	Ditch 5014	F3 ditch W corner	375-425	6c	2b undiagnostic iron (aerated)	14	138	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	2b undiagnostic iron (aerated)	5	274	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	2b undiagnostic iron (aerated)	4	98	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	2b undiagnostic iron (aerated)	2	72	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	2b undiagnostic iron (aerated)		110	(sample 4)
5013	Ditch 5014	F3 ditch W corner	375-425	6c	4a Hearth lining	4	62	B. clay really
5013	Ditch 5014	F3 ditch W corner	375-425	6c	4a Hearth lining	5	30	Mainly burnt clay
5013	Ditch 5014	F3 ditch W corner	375-425	6c	8a Iron concretion	12	326	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	8a Iron concretion	12	226	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	8a Iron concretion		120	(sample 4)
5013	Ditch 5014	F3 ditch W corner	375-425	6c	8b Magnetic fines		148	(sample 4)
5015	Ditch 5014	F3 ditch W corner	375-425	6c	5b Smelting	1	82	
5015	Ditch 5014	F3 ditch W corner	375-425	6c	8a Iron concretion	14	86	
5015	Ditch 5014	F3 ditch W corner	375-425	6c	8a Iron concretion	29	550	
5018	Ditch 5019	F3 ditch W corner	350-420	6c	1a Fuel ash	2	26	
5018	Ditch 5019	F3 ditch W corner	350-420	6c	2a Undiagnostic iron (dense)	1	142	
5018	Ditch 5019	F3 ditch W corner	350-420	6c	2b undiagnostic iron (aerated)	52	776	
5018	Ditch 5019	F3 ditch W corner	350-420	6c	2b undiagnostic iron (aerated)	38	704	
5018	Ditch 5019	F3 ditch W corner	350-420	6c	8a Iron concretion	6	92	
5018	Ditch 5019	F3 ditch W corner	350-420	6c	8a Iron concretion	20	218	
5020	Ditch 5021	F3 ditch W corner	200-410	6	2b Undiagnostic iron (aerated)	5	338	
5020	Ditch 5021	F3 ditch W corner	200-410	6	4a Hearth lining	1	6	Burnt clay
5020	Ditch 5021	F3 ditch W corner	200-410	6	8a Iron concretion	20	252	
5021	Ditch 5021	F3 ditch W corner	200-410	6	2b undiagnostic iron (aerated)	15	378	

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5021	Ditch 5021	F3 ditch W corner	200-410	6	8a Iron concretion	16	346	
5030	Ditch 5031	F3 ditch W corner	370-420	6c	2a Undiagnostic iron (dense)	1	550	
5030	Ditch 5031	F3 ditch W corner	370-420	6c	2b undiagnostic iron (aerated)	5	174	
5030	Ditch 5031	F3 ditch W corner	370-420	6c	2b undiagnostic iron (aerated)	60	1874	
5030	Ditch 5031	F3 ditch W corner	370-420	6c	2b undiagnostic iron (aerated)	24	1586	
5030	Ditch 5031	F3 ditch W corner	370-420	6c	8a Iron concretion	2	65	
5030	Ditch 5031	F3 ditch W corner	370-420	6c	8a Iron concretion	4	88	
5100	ditch 5104	F3 ditch W corner	350-420	6c	2a Undiagnostic iron (dense)	1	346	
5100	ditch 5104	F3 ditch W corner	350-420	6c	2b undiagnostic iron (aerated)	3	14	
5100	ditch 5104	F3 ditch W corner	350-420	6c	2b undiagnostic iron (aerated)	1	16	
5100	ditch 5104	F3 ditch W corner	350-420	6c	2b undiagnostic iron (aerated)	3	188	
5100	ditch 5104	F3 ditch W corner	350-420	6c	2b undiagnostic iron (aerated)	3	28	
5100	ditch 5104	F3 ditch W corner	350-420	6c	8a Iron concretion	2	28	
5100	ditch 5104	F3 ditch W corner	350-420	6c	8a Iron concretion	2	28	
5206	Ditch 5207	F3 ditch W corner	350-420	6c	2b undiagnostic iron (aerated)	14	1050	
5206	Ditch 5207	F3 ditch W corner	350-420	6c	2b undiagnostic iron (aerated)	27	1156	
5206	Ditch 5207	F3 ditch W corner	350-420	6c	2b undiagnostic iron (aerated)	14	594	
5206	Ditch 5207	F3 ditch W corner	350-420	6c	4a Hearth lining	1	18	Dull red fine sand
5206	Ditch 5207	F3 ditch W corner	350-420	6c	8a Iron concretion	16	236	
5208	Ditch 5209	F3 ditch W corner	370-420	6c	2a Undiagnostic iron (dense)	1	358	
5208	Ditch 5209	F3 ditch W corner	370-420	6c	2b undiagnostic iron (aerated)	7	422	
5003	PH13 5233	F4 building	250-375	6	2b undiagnostic iron (aerated)	4	28	
5003	PH13 5233	F4 building	250-375	6	2b undiagnostic iron (aerated)	2	270	
5003	PH13 5233	F4 building	250-375	6	5a Tap slag	1	322	Worn

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5116	PH01 5117	F4 building	200-350	6	1a Fuel ash	4	50	
5116	PH01 5117	F4 building	200-350	6	1a Fuel ash	6	72	
5116	PH01 5117	F4 building	200-350	6	2b undiagnostic iron (aerated)	44	528	
5116	PH01 5117	F4 building	200-350	6	2b undiagnostic iron (aerated)	26	1062	
5116	PH01 5117	F4 building	200-350	6	2b undiagnostic iron (aerated)	38	822	
5116	PH01 5117	F4 building	200-350	6	4a Hearth lining	5	48	Dull red, vitrified
5116	PH01 5117	F4 building	200-350	6	4a Hearth lining	2	12	Brick red, vitrified
5116	PH01 5117	F4 building	200-350	6	4a Hearth lining	6	50	Dull red, vitrified
5116	PH01 5117	F4 building	200-350	6	8a Iron concretion	4	32	
5116	PH01 5117	F4 building	200-350	6	8a Iron concretion	1	14	
5116	PH01 5117	F4 building	200-350	6	8a Iron concretion	11	232	
5118	PH02 5119	F4 building	70-370	6	3b Hammerscale		1	Flakes (<1mm) x10-25 (Δ 10)
5118	PH02 5119	F4 building	70-370	6	8a Iron concretion	1	4	
5118	PH02 5119	F4 building	70-370	6	8b Magnetic fines		260	(sample 10)
5120	PH03 5121	F4 building	130-250	6 res	2b undiagnostic iron (aerated)	2	442	
5120	PH03 5121	F4 building	130-250	6 res	8a Iron concretion	2	64	
5120	PH03 5121	F4 building	130-250	6 res	8b Magnetic fines		416	(sample 11)
5120	PH03 5121	F4 building	130-250	6 res	8b Magnetic fines		136	(sample 11)
5122	PH04 5123	F4 building	270-400	6	2b undiagnostic iron (aerated)	3	16	
5122	PH04 5123	F4 building	270-400	6	2b undiagnostic iron (aerated)	1	40	
5122	PH04 5123	F4 building	270-400	6	8a Iron concretion	110	88	Count estimated
5122	PH04 5123	F4 building	270-400	6	8b Magnetic fines		100	Coarse (sample 12)
5122	PH04 5123	F4 building	270-400	6	8b Magnetic fines		132	Fine (sample 12)
5124	PH05 5125	F4 building	300-400	6	2a Undiagnostic iron (dense)	1	330	

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5124	PH05 5125	F4 building	300-400	6	2b undiagnostic iron (aerated)	3	80	
5126	PH06 5127	F4 building	270-400	6	3b Hammerscale		1	Flakes (to 1mm) x10-25 (sample 35)
5126	PH06 5127	F4 building	270-400	6	8b Magnetic fines		46	(sample 35)
5128	PH07 pipe 5129	F4 building	270-420	6	2b undiagnostic iron (aerated)	2	64	
5128	PH07 pipe 5129	F4 building	270-420	6	2b undiagnostic iron (aerated)	7	174	
5128	PH07 pipe 5129	F4 building	270-420	6	2b undiagnostic iron (aerated)	2	44	
5128	PH07 pipe 5129	F4 building	270-420	6	4a Hearth lining	1	88	Dull ornge/red, fuel ash slag adhering
5128	PH07 pipe 5129	F4 building	270-420	6	5b Smelting	1	438	Worn
5128	PH07 pipe 5129	F4 building	270-420	6	8a Iron concretion	1	45	
5130	PH08 5131	F4 building	330-400	6b-c	3b Hammerscale		1	Flakes (<1mm) x10-25 (Δ16)
5130	PH08 5131	F4 building	330-400	6b-c	8b Magnetic fines		88	(sample 16)
5132	PH09 5133	F4 building	200-300	6a-b	1a Fuel ash	1	28	
5132	PH09 5133	F4 building	200-300	6a-b	2b undiagnostic iron (aerated)	4	264	
5132	PH09 5133	F4 building	200-300	6a-b	8a Iron concretion	9	122	
5132	PH09 5133	F4 building	200-300	6a-b	8a Iron concretion	1	2	
5132	PH09 5133	F4 building	200-300	6a-b	8a Iron concretion	3	22	
5134	PH10 pipe 5135	F4 building	270-420	6b-c	2b undiagnostic iron (aerated)	7	132	
5134	PH10 pipe 5135	F4 building	270-420	6b-c	5a Tap slag	1	26	Worn
5134	PH10 pipe 5135	F4 building	270-420	6b-c	8a Iron concretion	1	126	
5134	PH10 pipe 5135	F4 building	270-420	6b-c	8a Iron concretion	200	188	Count estimated
5134	PH10 pipe 5135	F4 building	270-420	6b-c	8b Magnetic fines		22	Coarse (sample 18)
5134	PH10 pipe 5135	F4 building	270-420	6b-c	8b Magnetic fines		8	Fine (sample 18)
5136	PH11 pipe 5137	F4 building	240-370	6b	2b undiagnostic iron (aerated)	1	50	

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5136	PH11 pipe 5137	F4 building	240-370	6b	8a Iron concretion		168	(sample 19)
5136	PH11 pipe 5137	F4 building	240-370	6b	8b Magnetic fines		36	Coarse (sample 19)
5136	PH11 pipe 5137	F4 building	240-370	6b	8b Magnetic fines		70	(sample 19)
5138	PH12 5139	F4 building	350-400	6c	2b undiagnostic iron (aerated)	1	68	
5138	PH12 5139	F4 building	350-400	6c	5b Smelting	1	52	
5138	PH12 5139	F4 building	350-400	6c	8a Iron concretion	3	40	
5140	PH08 pipe 5202	F4 building	370-420	6c	8a Iron concretion		6	(sample 21)
5140	PH08 pipe 5202	F4 building	370-420	6c	8b Magnetic fines		64	(sample 21)
5142	PH09 pipe 5143	F4 building	270-400	6b-c	2a Undiagnostic iron (dense)	1	552	
5142	PH09 pipe 5143	F4 building	270-400	6b-c	8a Iron concretion	2	28	
5142	PH09 pipe 5143	F4 building	270-400	6b-c	8b Magnetic fines		64	(sample 22)
5144	PH02 pipe 5145	F4 building		6	1a Fuel ash		10	(sample 23)
5144	PH02 pipe 5145	F4 building		6	2b undiagnostic iron (aerated)	1	82	
5144	PH02 pipe 5145	F4 building		6	8a Iron concretion	1	14	
5144	PH02 pipe 5145	F4 building		6	8a Iron concretion		16	(sample 23)
5144	PH02 pipe 5145	F4 building		6	8b Magnetic fines		100	(sample 23)
5148	PH03 pipe 5149	F4 building	250-350	6b	3b Hammerscale		1	Flakes (to 1mm) x25-50, spheres <10 (sample 24)
5148	PH03 pipe 5149	F4 building	250-350	6b	8b Magnetic fines		50	(sample 24)
5152	PH09 pipe 5240	F4 building			3b Hammerscale		1	Flakes (to 1mm) x25-50 (sample 30)
5152	PH09 pipe 5240	F4 building			8b Magnetic fines		64	8a/8b mix really (sample 30)
5152	PH09 pipe 5240	F4 building			8b Magnetic fines		58	Fine (sample 30)
5201	PH08 pipe 5202	F4 building	325-420	6c	3b Hammerscale		1	Flakes (to 1mm) x10-25 (Δ32)
5201	PH08 pipe 5202	F4 building	325-420	6c	8a Iron concretion	4	22	

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5201	PH08 pipe 5202	F4 building	325-420	6c	8a Iron concretion	1	6	
5201	PH08 pipe 5202	F4 building	325-420	6c	8b Magnetic fines		66	8a/8b mix really (sample 32)
5201	PH08 pipe 5202	F4 building	325-420	6c	8b Magnetic fines		52	Fine (sample 32)
5213	PH07 pipe 5129	F4 building	240-400	6	8b Magnetic fines		22	(sample 31)
5217	PH11 pipe 5137	F4 building			8b Magnetic fines		68	(sample 36)
5223	PH08 pipe 5202	F4 building			8b Magnetic fines		30	(sample 37)
5231	PH13 pipe 5232	F4 building	270-350	6	2b undiagnostic iron (aerated)	2	74	
5231	PH13 pipe 5232	F4 building	270-350	6	8a Iron concretion	4	80	
5241	PH06 pipe 5242	F4 building			3b Hammerscale		1	Flakes (to 1mm) <10, spheres <10 (sample 48)
5241	PH06 pipe 5242	F4 building			8a Iron concretion		90	(sample 48)
5241	PH06 pipe 5242	F4 building			8b Magnetic fines		58	(sample 48)
5243	PH06 pipe 5242	F4 building	370+	6c	8b Magnetic fines		78	Magnetic (sample 47)
5245	PH04 pipe 5246	F4 building	300-400	6b-c	3b Hammerscale		1	Flakes (to 1mm) x25-50, spheres <10 (sample 42)
5245	PH04 pipe 5246	F4 building	300-400	6b-c	8a Iron concretion		326	(sample 42)
5245	PH04 pipe 5246	F4 building	300-400	6b-c	8b Magnetic fines		92	Magnetic (sample 42)
5247	PH07 pipe 5129	F4 building			3b Hammerscale		1	Flakes (to 1mm) x25-50 (sample 43)
5247	PH07 pipe 5129	F4 building			8a Iron concretion		62	Not magnetic (sample 43)
5247	PH07 pipe 5129	F4 building			8b Magnetic fines		34	(sample 43)
5248	PH04 pipe 5246	F4 building	270-400	6b-c	2a Undiagnostic iron (dense)		80	x2 (sample 49)
5248	PH04 pipe 5246	F4 building	270-400	6b-c	3b Hammerscale		1	Flakes (to 1mm) <10 (sample 49)
5248	PH04 pipe 5246	F4 building	270-400	6b-c	8a Iron concretion		24	(sample 49)
5248	PH04 pipe 5246	F4 building	270-400	6b-c	8b Magnetic fines		10	(sample 49)
5249	PH12 pipe 5250	F4 building			2b undiagnostic iron (aerated)	3	152	

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5249	PH12 pipe 5250	F4 building			5b Smelting	1	206	
5249	PH12 pipe 5250	F4 building			8b Magnetic fines		10	(sample 45)
5251	PH1 5117	F4 building	180-250	5	2b undiagnostic iron (aerated)	28	322	
5251	PH1 5117	F4 building	180-250	5	2b undiagnostic iron (aerated)	6	108	
5261	PH1 5117	F4 building	250-350	6	2b undiagnostic iron (aerated)	14	370	
5261	PH1 5117	F4 building	250-350	6	8b Magnetic fines		68	Incl 8a, coarse (sample 53)
5261	PH1 5117	F4 building	250-350	6	8b Magnetic fines		96	Fine (sample 53)
5262	PH1 pipe 5266	F4 building	270-400	6	2a Undiagnostic iron (dense)	1	120	
5262	PH1 pipe 5266	F4 building	270-400	6	2b undiagnostic iron (aerated)		20	x6 (sample 52)
5262	PH1 pipe 5266	F4 building	270-400	6	3b Hammerscale		1	Flakes (to 1mm) x25-50 (sample 52)
5262	PH1 pipe 5266	F4 building	270-400	6	4a Hearth lining	1	6	Dull red, vitrified
5262	PH1 pipe 5266	F4 building	270-400	6	8b Magnetic fines		186	Some 8a, coarse (sample 52)
5262	PH1 pipe 5266	F4 building	150-400	6	8b Magnetic fines		130	(sample 52)
5263	PH1 5117	F4 building	300-370	6	8a Iron concretion		58	Not magnetic (sample 54)
5263	PH1 5117	F4 building	300-370	6	8b Magnetic fines		20	(sample 54)
5264	PH1 5117	F4 building	150-270	5-6	2b undiagnostic iron (aerated)	1	140	
5264	PH1 5117	F4 building	150-270	5-6	8a Iron concretion	1	94	
5264	PH1 5117	F4 building	150-270	5-6	8b Magnetic fines		40	Ferruginous siltstone etc, worn pebbles, granules
5269	PH1 5117	F4 building	270+	6	8a Iron concretion	3	80	
5045	Ditch 5046	F6 ditch W corner	n/a	n/a	2b undiagnostic iron (aerated)	3	78	
5004	Hearth 5038	F7 forging hearth	350-425	6C	1a Fuel ash	1	16	
5004	Hearth 5038	F7 forging hearth	350-425	6C	2b undiagnostic iron (aerated)	6	122	
5004	Hearth 5038	F7 forging hearth	350-425	6C	4a Hearth lining	3	88	Dull red, vitrified

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5004	Hearth 5038	F7 forging hearth	350-425	6C	8a Iron concretion	2	38	
5004	Hearth 5038	F7 forging hearth	350-425	6C	8b Magnetic fines		1620	500+ (sample 2)
5053	Hearth 5054	F7 forging hearth	325-420	6c	1a Fuel ash	1	22	
5053	Hearth 5054	F7 forging hearth	325-420	6c	2a Undiagnostic iron (dense)	1	178	
5053	Hearth 5054	F7 forging hearth	325-420	6c	2b undiagnostic iron (aerated)	2	72	
5053	Hearth 5054	F7 forging hearth	325-420	6c	2b undiagnostic iron (aerated)	43	1444	
5053	Hearth 5054	F7 forging hearth	325-420	6c	2b undiagnostic iron (aerated)		44	x3 (sample 5)
5053	Hearth 5054	F7 forging hearth	325-420	6c	8a Iron concretion	2	22	
5053	Hearth 5054	F7 forging hearth	325-420	6c	8b Magnetic fines		50	Most of 8b are ferruginous stone - not magnetic
5053	Hearth 5054	F7 forging hearth	325-420	6c	8b Magnetic fines		68	(sample 5)
5053	Hearth 5054	F7 forging hearth	325-420	6c	8b Magnetic fines		366	500+ (sample 5)
5080	PH 5079	F7 forging hearth	n/a	n/a	8a Iron concretion	2	2	
5055	Well 5056	F9 sump/well	200-400	6	2b undiagnostic iron (aerated)	6	230	
5055	Well 5056	F9 sump/well	200-400	6	5a Tap slag	1	62	Worn
5055	Well 5056	F9 sump/well	200-400	6	8a Iron concretion	3	70	
5057	Well 5058	F9 sump/well	350-410	6c	1a Fuel ash	1	6	
5057	Well 5058	F9 sump/well	350-410	6c	2b undiagnostic iron (aerated)	4	346	
5057	Well 5058	F9 sump/well	350-410	6c	2b undiagnostic iron (aerated)	11	202	
5057	Well 5058	F9 sump/well	350-410	6c	5b Smelting	1	30	
5057	Well 5058	F9 sump/well	350-410	6c	8a Iron concretion	3	124	x1 with vitrified face
5063	Well 5056	F9 sump/well	350-410	6c	2b undiagnostic iron (aerated)	1	122	
5063	Well 5056	F9 sump/well	350-410	6c	8a Iron concretion	1	15	
5067	Well 5058	F9 sump/well	350-410	6c	2b undiagnostic iron (aerated)	1	32	
5067	Well 5058	F9 sump/well	350-410	6c	8a Iron concretion	1	62	

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5067	Well 5058	F9 sump/well	350-410	6c	8a Iron concretion	5	34	
5085	Well 5058	F9 sump/well	350+	6c	3b Hammerscale		1	Flakes (< 1mm) x50-75, spheres x10-20 (Δ7)
5085	Well 5058	F9 sump/well	350+	6c	8a Iron concretion	2	80	
5085	Well 5058	F9 sump/well	350+	6c	8a Iron concretion		274	(sample Δ7)
5085	Well 5058	F9 sump/well	350+	6c	8b Magnetic fines		202	(sample Δ7)
5089	well 5058	F9 sump/well	270-400	6	2b undiagnostic iron (aerated)	6	312	
5153	Well 5054	F9 sump/well	370-420	6c	8a Iron concretion	2	10	
5159	Well 5058	F9 sump/well	370+	6c	2b undiagnostic iron (aerated)	1	12	
5159	Well 5058	F9 sump/well	370+	6c	2b undiagnostic iron (aerated)	7	78	
5159	Well 5058	F9 sump/well	370+	6c	4a Hearth lining	1	24	Reduced
5159	Well 5058	F9 sump/well	370+	6c	4a Hearth lining	3	66	Dull red, vitrified
5159	Well 5058	F9 sump/well	370+	6c	5a Tap slag	1	24	
5159	Well 5058	F9 sump/well	370+	6c	5b Smelting	1	82	Worn
5159	Well 5058	F9 sump/well	370+	6c	8a Iron concretion	4	40	
5159	Well 5058	F9 sump/well	370+	6c	8a Iron concretion	10	114	
5159	Well 5058	F9 sump/well	370+	6c	8b Magnetic fines		144	(sample 28)
5194	Well 5196	F9 sump/well	300-400	6c	3b Hammerscale		1	Flakes (<1mm) <10 (Δ25)
5194	Well 5196	F9 sump/well	300-400	6c	8b Magnetic fines		26	(sample 25)
5195	Well 5196	F9 sump/well	270-420	6c	1a Fuel ash	1	10	
5195	Well 5196	F9 sump/well	270-420	6c	8a Iron concretion	200	164	Count estimated
5197	Well 5196	F9 sump/well	325+	6b-c	3b Hammerscale		1	Flakes (<1mm) <10 (Δ26)
5197	Well 5196	F9 sump/well	325+	6b-c	3b Hammerscale		1	Flakes (<1mm) <10 (Δ 27)
5197	Well 5196	F9 sump/well	325+	6b-c	8b Magnetic fines		94	(sample 26)
5197	Well 5196	F9 sump/well	325+	6b-c	8b Magnetic fines		96	(sample 27)

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5198	Well 5058	F9 sump/well	370+	6c	8a Iron concretion		284	Not magnetic (sample 44)
5198	Well 5058	F9 sump/well	370+	6c	8b Magnetic fines		120	Magnetic (sample 44)
5212	Well 5154	F9 sump/well	370+	6c	3b Hammerscale		1	Flakes (to 1mm) x10-25 (sample 29)
5212	Well 5154	F9 sump/well	370+	6c	8b Magnetic fines		392	8a/8b mix really (sample 29)
5212	Well 5154	F9 sump/well	370+	6c	8b Magnetic fines		46	Fine (sample 29)
5225	Well 5056	F9 sump/well	370+	6c	2b undiagnostic iron (aerated)		28	x2 (sample 50)
5225	Well 5056	F9 sump/well	370+	6c	3b Hammerscale		1	Flakes (to 1mm) x50-100 (sample 50)
5225	Well 5056	F9 sump/well	370+	6c	8a Iron concretion		212	(sample 50)
5225	Well 5056	F9 sump/well	370+	6c	8b Magnetic fines		94	(sample 38)
5225	Well 5056	F9 sump/well	370+	6c	8b Magnetic fines		7	(sample 39)
5225	Well 5056	F9 sump/well	370+	6c	8b Magnetic fines		100	(sample 50)
5226	Well 5056	F9 sump/well	300-370	6b-c	3b Hammerscale		1	Flakes (<1mm) x50-100, spheres <10 (Δ39)
5226	Well 5056	F9 sump/well	300-370	6b-c	3b Hammerscale		1	Flakes (to 1mm) x25-50, spheres <10 (sample 40)
5226	Well 5056	F9 sump/well	300-370	6b-c	8b Magnetic fines		506	Not magnetic (sample 40)
5226	Well 5056	F9 sump/well	300-370	6b-c	8b Magnetic fines		112	Fine & magnetic (sample 40)
5022	PH 5023	G1 postholes	270-400	6	8a Iron concretion	2	24	
5074	Pit 5075	G2 postholes	250+	6b	2b undiagnostic iron (aerated)	1	64	
5074	Pit 5075	G2 postholes	250+	6b	2b undiagnostic iron (aerated)	1	30	
5074	Pit 5075	G2 postholes	250+	6b	8a Iron concretion	3	24	
5068	Ditch/pit 5069	G3 W corner	100-200	5	2b undiagnostic iron (aerated)	2	94	
5068	Ditch/pit 5069	G3 W corner	100-200	5	5b Smelting	1	200	
5070	Ditch 5071	G3 W corner	43-140	4	1a Fuel ash	1	10	

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5070	Ditch 5071	G3 W corner	43-140	4	2a Undiagnostic iron (dense)	1	370	
5070	Ditch 5071	G3 W corner	43-140	4	2b undiagnostic iron (aerated)	18	1460	
5070	Ditch 5071	G3 W corner	43-140	4	4a Hearth lining	2	28	Reduced, silty
5034	PH 5035	G3 W corner	325-370	6b	3b Hammerscale		1	Flakes (to 1mm) x25-30 (sample 3)
5034	PH 5035	G3 W corner	325-370	6b	4a Hearth lining	1	3	
5034	PH 5035	G3 W corner	325-370	6b	8a Iron concretion	4	36	
5034	PH 5035	G3 W corner	325-370	6b	8a Iron concretion		1422	500+ (sample 3)
5039	PH 5040	G3 W corner	400-500	7	2a Undiagnostic iron (dense)	1	1264	
5039	PH 5040	G3 W corner	400-500	7	2b undiagnostic iron (aerated)	2	128	
5040	PH 5040	G3 W corner	400-500	7	8a Iron concretion	8	18	
5041	PH 5042	G3 W corner	300-400+	6	2b Undiagnostic iron (aerated)	6	378	
5041	PH 5042	G3 W corner	300-400+	6	8a Iron concretion	1	3	
5051	PH 5052	G3 W corner	200-300	5	2b undiagnostic iron (aerated)	2	62	
5051	PH 5052	G3 W corner	200-300	5	8a Iron concretion	4	78	
5059	PH 5060	G3 W corner	Res	n/a	2b undiagnostic iron (aerated)	2	30	
5061	PH 5062	G3 W corner	Res	n/a	1a Fuel ash	1	16	
5061	PH 5062	G3 W corner	Res	n/a	2b undiagnostic iron (aerated)	1	14	
5061	PH 5062	G3 W corner	Res	n/a	2b undiagnostic iron (aerated)	5	238	
5001	cleaning	n/a	100-400	n/a	1a Fuel ash	2	18	Vitrified grey (poss fused tile)
5001	cleaning	n/a	100-400	n/a	2a undiagnostic iron (dense)	3	552	
5001	cleaning	n/a	100-400	n/a	2b undiagnostic iron (aerated)	6	308	
5001	cleaning	n/a	100-400	n/a	2b undiagnostic iron (aerated)	22	654	
5001	cleaning	n/a	100-400	n/a	2b undiagnostic iron (aerated)	4	124	

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5001	cleaning	n/a	100-400	n/a	4a Hearth lining	7	196	Dull orange. Vitrified with type 2b slag adhering
5001	cleaning	n/a	100-400	n/a	4a Hearth lining	1	32	Dull red silt clay, vitrified
5001	cleaning	n/a	100-400	n/a	8a Iron concretion	6	166	
5002	PH?	n/a	410+	Res	2b undiagnostic iron (aerated)	9	228	
5002	PH?	n/a	410+	Res	4a Hearth lining	1	24	Reduced, vitrified
5005	cleaning	n/a	270-400	6	2a undiagnostic iron (dense)	4	2820	
5005	cleaning	n/a	270-400	6	2b undiagnostic iron (aerated)	1	560	
5005	cleaning	n/a	270-400	6	2b undiagnostic iron (aerated)	3	16	
5005	cleaning	n/a	270-400	6	5a Tap slag	2	220	Thin, onto sanded base
5005	cleaning	n/a	270-400	6	5b Smelting	2	920	
5005	cleaning	n/a	270-400	6	8a Iron concretion	1	1280	
5065	PH 5066	n/a	260-400	6	1a Fuel ash	2	20	
5065	PH 5066	n/a	260-400	6	1a Fuel ash	1	54	
5065	PH 5066	n/a	260-400	6	1a Fuel ash	2	18	
5065	PH 5066	n/a	260-400	6	2b undiagnostic iron (aerated)	19	412	
5065	PH 5066	n/a	260-400	6	2b undiagnostic iron (aerated)	11	532	
5065	PH 5066	n/a	260-400	6	4a Hearth lining	3	84	Reduced, vitrified
5065	PH 5066	n/a	260-400	6	4a Hearth lining	4	66	Brick red, vitrified
5037	PH 5146	n/a	Res	n/a	2b undiagnostic iron (aerated)	1	64	
5000	cleaning	n/a	u/s	n/a	1a Fuel ash	1	28	Aerated
5000	cleaning	n/a	u/s	n/a	1a Fuel ash	1	16	
5000	cleaning	n/a	u/s	n/a	1a Fuel ash	3	50	
5000	cleaning	n/a	u/s	n/a	1a Fuel ash	1	22	
5000	cleaning	n/a	u/s	n/a	2a undiagnostic iron (dense)	9	1214	Grey, slightly aerated but quite dense with rusty brown coating
5000	cleaning	n/a	u/s	n/a	2a undiagnostic iron (dense)	3	700	

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5000	cleaning	n/a	u/s	n/a	2a undiagnostic iron (dense)	3	204	
5000	cleaning	n/a	u/s	n/a	2a undiagnostic iron (dense)	3	86	
5000	cleaning	n/a	u/s	n/a	2a undiagnostic iron (dense)	5	286	
5000	cleaning	n/a	u/s	n/a	2a undiagnostic iron (dense)	1	98	
5000	cleaning	n/a	u/s	n/a	2b undiagnostic iron (aerated)	52	884	As 2a biut notably aerated/lighter
5000	cleaning	n/a	u/s	n/a	2b undiagnostic iron (aerated)	50	1628	
5000	cleaning	n/a	u/s	n/a	2b undiagnostic iron (aerated)	49	1004	
5000	cleaning	n/a	u/s	n/a	2b undiagnostic iron (aerated)	58	1648	
5000	cleaning	n/a	u/s	n/a	2b undiagnostic iron (aerated)	2	126	
5000	cleaning	n/a	u/s	n/a	2b undiagnostic iron (aerated)	54	1968	
5000	cleaning	n/a	u/s	n/a	2b undiagnostic iron (aerated)	25	856	
5000	cleaning	n/a	u/s	n/a	2b undiagnostic iron (aerated)	1	314	
5000	cleaning	n/a	u/s	n/a	2b undiagnostic iron (aerated)	3	196	
5000	cleaning	n/a	u/s	n/a	3a Smithing forge bottom	1	200	Concave-convex. 80mm di, 32mm thick
5000	cleaning	n/a	u/s	n/a	4a Hearth lining	1	22	Grey silt clay with vitrified face
5000	cleaning	n/a	u/s	n/a	4a Hearth lining	1	16	
5000	cleaning	n/a	u/s	n/a	4a Hearth lining	2	50	Type 2b slag adhering
5000	cleaning	n/a	u/s	n/a	4a Hearth lining	3	32	Dull red sandy clay, vitrified
5000	cleaning	n/a	u/s	n/a	5a Tap slag	2	32	Worn
5000	cleaning	n/a	u/s	n/a	5b Smelting	2	476	Dense, metallic grey. 'Molten' droplets
5000	cleaning	n/a	u/s	n/a	8a Iron concretion	7	260	Ferruginous fine sandy silt/clay with iron seams
5000	cleaning	n/a	u/s	n/a	8a Iron concretion	40	844	
5000	cleaning	n/a	u/s	n/a	8a Iron concretion	69	1284	
5000	cleaning	n/a	u/s	n/a	8a Iron concretion	31	546	

Cntxt	Parent	Feature	Date	Phse	Type of slag	No	Gms	Remarks
5008	Topsoil	n/a	Res	n/a	2b undiagnostic iron (aerated)	2	58	
5008	Topsoil	n/a	Res	n/a	8a Iron concretion	2	22	
5111	pit NW baulk	pit NW baulk	250-300	6a	2b undiagnostic iron (aerated)	1	324	
5111	pit NW baulk	pit NW baulk	250-300	6a	2b undiagnostic iron (aerated)	3	170	
5111	pit NW baulk	pit NW baulk	250-300	6a	2b undiagnostic iron (aerated)	1	6	
5111	pit NW baulk	pit NW baulk	250-300	6a	2b undiagnostic iron (aerated)	1	10	
5111	pit NW baulk	pit NW baulk	250-300	6a	4a Hearth lining	1	38	vitrified clay
5111	pit NW baulk	pit NW baulk	250-300	6a	8a Iron concretion	2	28	
5111	pit NW baulk	pit NW baulk	250-300	6a	8a Iron concretion	8	70	
					TOTAL	2327	80710	

16.8.1: An assessment of the geological material by Luke Barber

The excavations at the site produced 1155 pieces of stone, weighing just over 47.5kg, from 80 individual contexts. As such the 2014 stone assemblage was nearly twice the size of the 2013 one. These totals include 810 pieces (8815g) from 32 different environmental residues. The assemblage has been fully listed on geological record sheets for the archive, with the resultant data being used to create an excel spreadsheet as part of the current assessment. Each stone group was allocated a type number for archive recording, with variations being kept separate by the addition of a letter. Sometimes these variations can be variations within the same outcrop but they can be the result of a different source/outcrop completely. Keeping these subdivisions may well aid future sourcing studies. The assemblage is characterised in Table 1 by type and approximate source.

Period/Type	Unstrat/ mixed	Roman: general	RB: Phases 4-5	RB: Phase 6	Totals
No. contexts	*2*	*7*	*10*	*61*	*80*
On-site					
1a Ferruginous fine sandstone	27/764g	27/198g	1/62g	329/3056g	384/4080g
1b Ferruginous sandstone	-	5/14g		23/60g	28/74g
1c Hard fine ferruginous sandstone	-	-	1/148g	13/114g	14/262g
5a Silty iron concretion	-	-	-	1/50g	1/50g
7d Tertiary flint	-	12/210g	1/2g	100/817g	113/1029g
7e Flint pebble	-	-	1/118g	-	1/118g
9a Ferruginous conglomerate	-	-	2/2136g	3/5858g	5/7994g
9b Shrave/iron concretion	-	-	1/192g	-	1/192g
11a Quartz	-	-	-	1/16g	1/16g
Chalk Downs etc (to south)					
7a Fire-cracked flint	45/840g	19/218g	19/216g	228/2404g	311/3678g
7b Downland flint	1/18g	-	-	5/4230g	6/4248g
7c Scorched flint	3/14g	2/39g	1/36g	100/833g	106/922g
18a Chalk	-	-	-	16/1561g	16/1561g
Local Wealden (mainly to north)					
2a Wealden Clay Ironstone	1/42g	-	6/540g	12/872g	19/1454g
4a Coarse ferruginous sandstone	-	-	-	34/676g	34/676g
10a Tunbridge Wells Sandstone (yellow/orange)	-	1/26g	-	8/618g	9/644g
10b Tunbridge Wells Sandstone (white/grey)	-	-	-	4/882g S	4/882g
10c Tunbridge Wells Sandstone (purple)	-	-	2/182g	3/2606g	5/2788g
13c Upper Greensand	-	-	-	1/774g Q	1/774g
15a Wealden siltstone	2/22g	-	-	1/66g	3/88g
19a Sussex Marble	-	-	--	8/5982g	8/5982g
Other Wealden (W Sussex)					

Period/Type	Unstrat/ mixed	Roman: general	RB: Phases 4-5	RB: Phase 6	Totals
13a Lodsworth Lower Greensand	-	-	-	4/1458g Q	4/1458g
13b Lower Greensand	4/1646g Q	-	1/684g Q	17/5124g Q	22/7454g
Regional English					
12a Coarse quartzitic sandstone	-	-	-	2/194g Q	2/194g
16a Kimmeridge shale	-	-	1/4g	1/2g	2/6g
17a Coal	3/22g	-	-	-	3/22g
17b Coal shale	3/10g	-	-	-	3/10g
Imported					
8a German lava	16/92g Q	--		33/1066g Q	49/1158g
Totals	105/3470g	66/705g	37/4320g	947/39,319g	1155/47,814g

Table 1: Characterisation of the geological material by type/source area (Q = quern. S = sharpening/polishing stone)).

A significant proportion of the assemblage is composed of unmodified pieces of stone that occur naturally on the site. The most common of these is the ferruginous fine sandstone (Type 1) that is very well represented by heavily water-worn small flat pebbles that have been worked down from the Weald by alluvial action. These are common within the natural Head deposits at the Barcombe villa site and an unsurprising addition to the alluvium of the valley. The silty iron concretions may actually represent iron-panning on the site itself as such deposits are not uncommon in the Head and alluvial deposits of the area. The ferruginous conglomerate was previously thought to derive from fissure fill deposits on the downs, but the current excavations have provided better examples containing pebbles, showing them to derive from the Ouse valley itself.

Material from the chalk downs, that must have been brought up-river by man, is also present. The most common material brought in from this source at the Barcombe villa was chalk and flint, used for both wall construction and surfacing. The absence of these materials in the collected stone assemblage is due to collecting policies but these types were undoubtedly deliberately imported to the site for similar tasks. The collected stone includes a significant quantity of flint that has been heat-affected.

Some 83 pieces of stone can be sourced to the Wealden Beds, mainly up-river of the site. Some of these may well have been washed downstream naturally and a number (especially type 10) show water-rounding, but much was probably deliberate brought in for construction. This is certainly the case with the Sussex-type marble pieces that were all recovered from the F9 sump/well. The vast majority do not show signs of having been worked but there is the edge from a probable ashlar block in 2a Wealden Clay Ironstone (cleaning [5000]) and a weathered 10b Tunbridge Wells sandstone cobble with high wear polish on one concave face (phase 6 ditch [5021, F3 ditch) has clearly been pressed into service as a sharpening stone. Fill [5225] of F9 sump/well produced a single fragment from a 32mm thick upper stone of an Upper Greensand rotary quern – an isolated find.

As with the 2013 assemblage there are two different types of Lower Greensand (Hythe Beds Sandstone) present, both of which appear to have been used solely for rotary hand-querns. One is the typical Lodsworth type with grey stringers from the West Sussex quarries (Peacock 1987), the other is more common (Table 1) and consists of a slightly softer type with no stringers but denser glauconitic grains. The latter's source is unknown and although a West Sussex source is probable, a closer one cannot be ruled out. The earliest quern was recovered from phase 4 deposits in the F1 central ditch. It consists of a 40mm thick fragment in Type 13b. The remainder of the lower greensand querns were

from phase 6 or unstratified deposits. The fragments are notably small and although the presence of upper and lower stones is in evidence no pieces were large enough to establish stone diameter. Thicknesses range between 26 and 75mm and one piece from PH5 [5229] of the F4 building shows edge wear suggesting it was used for sharpening after breakage. Other quern types include a number of amorphous piece from German lava querns and a 41mm thick fragment of Type 12a Millstone Grit type. All were from phase 6 or unstratified deposits though usually German lava is more common in the earlier part of the Roman period suggesting a high degree of residuality. There is no particular concentration of quern fragments – although five came from the F9 sump/well pieces of quern were also recovered from most ditches and the post-holes associated with the F4 building. As such the material is considered to be a dense background scatter of material within the settlement.

The remaining stone consists of two Kimmeridge shale (also noted in the 2013 assemblage) fragments from two separate post-holes of the F4 building (neither with any obvious form) and a few pieces of post-medieval coal/coal shale from cleaning [5000].

Potential

The geological material from the site is only considered to hold limited potential for further study. This is due to the relatively small size of the assemblage, the low numbers of worked pieces and to a lesser extent, the uncertainty about residuality. The material natural to the site is unmodified and not considered to hold any potential for further analysis. The material derived from the downs and the Weald is also essentially unmodified and, beyond demonstrating sourcing of materials both up and down the river valley, offers little potential for further study. This is particularly the case as most of this material cannot be specifically associated with a particular use of chronological phase.

The quern stones are of more interest in not only do they demonstrate on-site processing, they show the sources of choice for the stones and will allow direct comparison with the much larger assemblage from Barcombe villa and other areas of the Bridge Farm settlement. The Kimmeridge shale demonstrates coastal trade reached significantly upriver.

Methodology

The stone has already been quantified on pro forma by context and stone type for archive. Further work will be limited to the comparison, even if provisionally, with the assemblage from Barcombe villa (whose archive is not yet completed) and the 2013 assemblage from Bridge Farm. A summary report will be compiled for publication, drawing heavily on the above factual statement. No pieces for illustration are proposed.

Reference:

Peacock, D. 1987. 'Iron Age and Roman Quern production at Lodsworth, West Sussex' *Antiquaries Journal* **67**, 61-85.

16.8.2: Catalogue of the geological material by Luke Barber

Cntxt	Parent/ Sample Δ	Feature /Group	Date	Phase	Stone type	No	Wt (g)	Comments
u/s				U/S	8a German lava	1	26	Amorphous
u/s				U/S	7a FCF	3	74	
5000	cleaning	n/a	u/s	U/S	1a Ferruginous fine sast	25	416	Water-worn
5000	cleaning	n/a	u/s	U/S	15a Wealden siltstone	2	22	water-worn
5000	cleaning	n/a	u/s	U/S	7a FCF	42	766	
5000	cleaning	n/a	u/s	U/S	7c Scorched flint	3	14	
5000	cleaning	n/a	u/s	U/S	7b Downland flint	1	18	Sphere - sponge fossil?
5000	cleaning	n/a	u/s	U/S	17a Coal	3	22	
5000	cleaning	n/a	u/s	U/S	17b Coal shale	3	10	
5000	cleaning	n/a	u/s	U/S	8a German lava	15	66	Amorphous
5000	cleaning	n/a	u/s	U/S	2a Wealden clay ironstone	1	42	Edge from ashlar block?
5000	cleaning	n/a	u/s	U/S	1a Ferruginous fine sast	2	348	Worn cobbles
5000	cleaning	n/a	u/s	U/S	13b Lower greensand	1	62	Quernuern frag. 42mm thick. Part grinding face
5000	cleaning	n/a	u/s	U/S	13b Lower greensand	1	526	Lower Quern stone frag. 35mm thick outer edge, 38mm+ toward centre. Pecked underside, worn grinding face. **Retained**
5000	cleaning	n/a	u/s	U/S	13b Lower greensand	1	196	Quern frag. 26mm thick. Part grinding face
5000	cleaning	n/a	u/s	U/S	13b Lower greensand	1	862	Quern/millstone frag. 75mm thick. Pt grinding face
5001	cleaning	F1 central ditch	100-400	RB	1a Ferruginous fine sast	6	122	water-worn
5001	cleaning	F1 central ditch	100-400	RB	10a Tunbridge Wells sandstone	1	26	water-worn
5001	cleaning	F1 central ditch	100-400	RB	7c Scorched flint	1	38	pebble frag. Mid-grey. Not calcareous

Cntxt	Parent/ Sample Δ	Feature /Group	Date	Phase	Stone type	No	Wt (g)	Comments
5001	cleaning	F1 central ditch	100-400	RB	7a FCF	5	98	
5003	PH13 5233	F4 building	250-375	6	1a Ferruginous fine sast	1	6	water-worn
5003	PH13 5233	F4 building	250-375	6	7a FCF	1	14	
5004	Hearth 5038	F7 forging hearth	350-425	6C	7a FCF	5	52	
5004	Hearth 5038	F7 forging hearth	350-425	6C	7c Scorched flint	3	302	Downland flint
5004	Hearth 5038	F7 forging hearth	350-425	6C	8a German lava	10	64	Amorphous
5004	Hearth 5038	F7 forging hearth	350-425	6C	1a Ferruginous fine sast	2	82	water-worn
5005	cleaning	n/a	270-400	6	1a Ferruginous fine sast	1	70	water-worn
5006	Ditch 5007	F1 central ditch	70-200	4	9b Shrave ore?	1	192	Shrave - could be ore
5006	Ditch 5007	F1 central ditch	70-200	4	9a Ferruginous conglomerate	2	2136	Flint pebbles in ferruginous concretion
5013	Ditch 5014	F3 ditch W corner	375-425	6c	1a Ferruginous fine sast	16	318	water-worn
5013	Ditch 5014	F3 ditch W corner	375-425	6c	7a FCF	2	16	
5013	Ditch 5014	F3 ditch W corner	375-425	6c	10a Tunbridge Wells sandstone	1	12	Worn into near sphere
5013	Ditch 5014 Δ4	F3 ditch W corner	375-425	6c	7a FCF	8	8	
5015	Ditch 5014	F3 ditch W corner	375-425	6c	7c Scorched flint	1	2	
5017	Hearth 5173	F2 banjo hearth	150-250	5	2a Wealden clay ironstone	5	210	
5017	Hearth 5173	F2 banjo hearth	150-250	5	7a FCF	2	54	
5017	Hearth 5173 Δ1	F2 banjo hearth	150-250	5	7a FCF	10	10	
5018	Ditch 5019	F3 ditch W corner	350-420	6c	8a German lava	6	16	Amorphous
5021	Ditch 5021	F3 ditch W corner	200-410	6	10b Tunbridge wells Sast (white/grey)	1	496	Weathered cobble frag with high polish wear on one concave face. Whetstone. **Retained**
5021	Ditch 5021	F3 ditch W corner	200-410	6	13b Lower greensand	1	646	Quern frag, surfaces gone

Cntxt	Parent/ Sample Δ	Feature /Group	Date	Phase	Stone type	No	Wt (g)	Comments
5021	Ditch 5021	F3 ditch W corner	200-410	6	10a Tunbridge Wells sandstone	1	36	water-worn
5022	PH 5023	G1	270-400	6	1a Ferruginous fine sast	6	34	water-worn
5022	PH 5023	G1	270-400	6	7a FCF	1	2	
5030	Ditch 5031	F3 ditch W corner	370-420	6c	7a FCF	1	4	
5037	PH 5146	n/a	Res	RB	7a FCF	1	16	
5041	PH 5042	G3 W corner	300-400+	6	7a FCF	2	12	
5043	PH 5044 Δ4	G3 W corner	300-400+	6	7a FCF	2	4	
5043	PH 5044 Δ4	G3 W corner	300-400+	6	7c Scorched flint	1	1	
5047	Ditch 5048	F1 central ditch	70-150	4	2a Wealden clay ironstone	1	330	
5051	PH 5052	G3 W corner	200-300	5	7a FCF	2	46	
5051	PH 5052	G3 W corner	200-300	5	7c Scorched flint	1	36	
5053	Hearth 5054	F7 forging hearth	325-420	6c	1a Ferruginous fine sast	3	132	
5053	Hearth 5054	F7 forging hearth	325-420	6c	7a FCF	2	60	
5053	Hearth 5054	F7 forging hearth	325-420	6c	7c Scorched flint	2	174	
5053	Hearth 5054	F7 forging hearth	325-420	6c	8a German lava	2	4	Amorphous
5053	Hearth 5054 Δ5	F7 forging hearth	325-420	6c	7a FCF	6	2	
5055	Well 5056	F9 sump/well	200-400	6	7a FCF	1	42	
5055	Well 5056	F9 sump/well	200-400	6	2a Wealden clay ironstone	2	24	
5057	Well 5058	F9 sump/well	350-410	6c	10a Tunbridge Wells sandstone	1	192	Water-worn
5063	Well 5056	F9 sump/well	350-410	6c	7a FCF	1	22	
5063	Well 5056	F9 sump/well	350-410	6c	4a Coarse ferruginous sandstone	1	14	
5067	Well 5058	F9 sump/well	350-410	6c	7a FCF	1	24	
5067	Well 5058	F9 sump/well	350-410	6c	9a Ferruginous conglomerate	1	170	

Cntxt	Parent/ Sample Δ	Feature /Group	Date	Phase	Stone type	No	Wt (g)	Comments
5067	Well 5058	F9 sump/well	350-410	6c	13b Lower greensand	1	96	Quern frag. 36mm thick. Burnt/degraded
5067	Well 5058	F9 sump/well	350-410	6c	13b Lower greensand	1	524	Quern frag. Upper stone. 57mm thick outer edge. 40mm thick near centre
5068	Ditch/pit 5069	G3 W corner	100-200	5	7a FCF	1	42	
5085	Well 5058	F9 sump/well	350+	6c	7b Downland flint	2	3122	Fresh nodules, part cortex
5085	Well 5058	F9 sump/well	350+	6c	18a Chalk	1	446	
5085	Well 5058	F9 sump/well	350+	6c	10c Tunbridge Welss Sast (purple)	1	2586	Slight water wear
5085	Well 5058	F9 sump/well	350+	6c	13a Lodsworth lower greensand	1	848	Lower Quern stone, frag. part grinding face. 26-28mm thick 34mm ext edge. **Retained**
5085	Well 5058	F9 sump/well	350+	6c	19a Shelly lmst/Sussex marble	1	928	Not typical of Sussex Marble - few gastropods visible
5085	Well 5058 Δ7	F9 sump/well	350+	6c	7a FCF	5	12	
5085	Well 5058 Δ7	F9 sump/well	350+	6c	13b Lower greensand	1	58	Quern frag. 28mm thick. Part grinding face
5085	Well 5058 Δ7	F9 sump/well	350+	6c	1a Ferruginous fine sast	90	290	Water-worn
5085	Well 5058 Δ7	F9 sump/well	350+	6c	1b Ferruginous sast?	11	34	(Iron-stained crusts) Water-worn
5086	Ditch Δ8 5087/5101	F1 central ditch	70-200	4	7a FCF	3	2	
5086	Ditch 5087/5101	F1 central ditch	70-200	4	10c Tunbridge Welss Sast (purple)	2	182	
5086	Ditch 5087/5101	F1 central ditch	70-200	4	1a Ferruginous fine sast	1	62	Cobble
5086	Ditch 5087/5101	F1 central ditch	70-200	4	1c Hard fine ferruginous sast	1	148	Boxstone or seams. Water-worn
5094	pit 5095	F10 large pit	370+	6c	1a Ferruginous fine sast	1	36	Worn
5067	Well 5058	F9 sump/well	350-410	6c	7a FCF	1	8	

Cntxt	Parent/ Sample Δ	Feature /Group	Date	Phase	Stone type	No	Wt (g)	Comments
5100	ditch 5104	F3 ditch W corner	350-420	6c	1a Ferruginous fine sast	7	520	Water-worn
5100	ditch 5104	F3 ditch W corner	350-420	6c	10b Tunbridge wells Sast (white/grey)	1	58	Water-worn
5100	ditch 5104	F3 ditch W corner	350-420	6c	13b Lower greensand	1	400	Quern frag. Upper stone. 38mm thick at edge. **Retained**
5101	ditch 5087	F1 central ditch	75-150	4	13b Lower greensand	1	684	Quern frag. 40mm thick. Up/Lo?. Rough grinding face
5102	pit 5103	F10 large pit	350-420	6c	12a Coarse quartzitic sandstone (Millstone Grit)	1	16	Irreg. Grey. Finer than usual
5111	pit NW baulk	pit NW baulk	250-300	6a	7a FCF	1	32	
5111	pit NW baulk	pit NW baulk	250-300	6a	11a Quartz	1	16	Pebble - gastrolith
5116	PH01 5117	F4 building	200-350	6	1a Ferruginous fine sast	2	66	Worn
5116	PH01 5117	F4 building	200-350	6	1c Hard fine ferruginous sast	1	12	Worn
5116	PH01 5117	F4 building	200-350	6	2a Wealden clay ironstone	2	60	Crust'
5116	PH01 5117	F4 building	200-350	6	5a Silty iron concretion	1	50	
5116	PH01 5117	F4 building	200-350	6	7a FCF	3	50	
5116	PH01 5117	F4 building	200-350	6	7b Downland flint	1	82	
5116	PH01 5117	F4 building	200-350	6	10b Tunbridge wells Sast (white/grey)	1	62	Irregular
5118	PH02 5119	F4 building	70-370	6	2a Wealden clay ironstone	1	192	
5118	PH02 5119	F4 building	70-370	6	4a Coarse ferruginous sandstone	1	50	Worn
5118	PH02 5119	F4 building	70-370	6	10a Tunbridge Wells sandstone	1	16	Worn
5118	PH02 5119	F4 building	70-370	6	13b Lower greensand	1	74	Irregular
5120	PH03 5121	F4 building	130-250	6 res	1a Ferruginous fine sast	2	58	water-worn

Cntxt	Parent/ Sample Δ	Feature /Group	Date	Phase	Stone type	No	Wt (g)	Comments
5120	PH03 5121	F4 building	130-250	6 res	7a FCF	1	3	
5120	PH03 5121	F4 building	130-250	6 res	16a Kimmeridge shale	1	2	
5120	PH03 5121 Δ11	F4 building	130-250	6 res	1a Ferruginous fine sast	53	334	River gravels
5120	PH03 5121 Δ11	F4 building	130-250	6 res	7a FCF	3	5	
5120	PH03 5121 Δ11	F4 building	130-250	6 res	7c Scorched flint	1	1	
5122	PH04 5123	F4 building	270-400	6	7a FCF	1	6	
5122	PH04 5123 Δ12	F4 building	270-400	6	7a FCF	7	22	
5122	PH04 5123 Δ12	F4 building	270-400	6	7c Scorched flint	2	3	
5124	PH05 5125	F4 building	300-400	6	7a FCF	1	12	
5124	PH05 5125	F4 building	300-400	6	7d Tertiary flint	1	6	
5128	PH07 pipe 5129	F4 building	270-420	6	1a Ferruginous fine sast	2	50	water-worn
5128	PH07 pipe 5129	F4 building	270-420	6	13b Lower greensand	1	138	Quern frag. Up/Lo stone? 25mm thick. Worn face
5130	PH08 5131 Δ16	F4 building	330-400	6b-c	7a FCF	2	4	
5130	PH08 5131 Δ16	F4 building	330-400	6b-c	7d Tertiary flint	12	10	
5132	PH09 5133	F4 building	200-300	6a-b	7a FCF	1	3	
5134	PH10 pipe 5135 Δ19	F4 building	270-420	6b-c	7a FCF	3	3	
5134	PH10 pipe 5135 Δ19	F4 building	270-420	6b-c	7c Scorched flint	2	2	
5134	PH10 pipe 5135 Δ19	F4 building	270-420	6b-c	7d Tertiary flint	8	10	
5138	PH12 5139	F4 building	350-400	6c	1a Ferruginous fine sast	1	18	
5138	PH12 5139	F4 building	350-400	6c	10a Tunbridge Wells sandstone	1	32	water-worn
5138	PH12 5139	F4 building	350-400	6c	13b Lower greensand	1	310	Quern frag. 42mm+ thick. Lower stone?. Worn face
5144	PH02 pipe 5145 Δ23	F4 building		6	7a FCF	5	8	

Cntxt	Parent/ Sample Δ	Feature /Group	Date	Phase	Stone type	No	Wt (g)	Comments
5144	PH02 pipe 5145	F4 building		6	7c Scorched flint	8	9	
5144	PH02 pipe 5145	F4 building		6	7d Tertiary flint	3	9	
5152	PH09 pipe 5240 Δ30	F4 building		RB	1a Ferruginous fine sast	4	8	
5152	PH09 pipe 5240 Δ30	F4 building		RB	7d Tertiary flint	8	184	
5153	Well 5054	F9 sump/well	370-420	6c	1a Ferruginous fine sast	1	192	Water-worn
5153	Well 5054	F9 sump/well	370-420	6c	7a FCF	2	72	
5157	Pit 5158	F10 large pit		6c	7a FCF	2	12	
5159	Well 5058	F9 sump/well	370+	6c	1a Ferruginous fine sast	2	242	Water-worn
5159	Well 5058	F9 sump/well	370+	6c	7c Scorched flint	1	14	
5159	Well 5058	F9 sump/well	370+	6c	13b Lower greensand	1	66	Quern frag. Part of a worn face
5159	Well 5058 Δ28	F9 sump/well	370+	6c	7a FCF	6	4	
5159	Well 5058	F9 sump/well	370+	6c	7a FCF	1	8	
5159	Well 5058	F9 sump/well	370+	6c	9a Ferruginous conglomerate	1	4920	
5165	Pit 5156	F10 large pit	270-420	6b-c	1a Ferruginous fine sast	1	8	
5165	Pit 5156	F10 large pit	270-420	6b-c	7d Tertiary flint	1	12	
5167	Pit 5156	F10 large pit	270-420	6b-c	1a Ferruginous fine sast	1	24	Worn
5167	Pit 5156 Δ41	F10 large pit	270-420	6b-c	7a FCF	3	2	
5167	Pit 5156 Δ41	F10 large pit	270-420	6b-c	7d Tertiary flint	5	26	
5168	Pit 5158 Δ38	F10 large pit	370-420	6c	7a FCF	3	18	
5177	PH 5178	F11A postholes	200-400	6	2a Wealden clay ironstone	1	192	
5181	PH 5182	F11A postholes	270-400	6	7a FCF	2	8	
5187	PH 5188 Δ33	F11A postholes		RB	7a FCF	1	8	
5189	PH 5190	F11A postholes	270-400	6	2a Wealden clay ironstone	2	38	
5193	Well 5056	F9 sump/well	300-400	6c	1a Ferruginous fine sast	2	22	Water-worn

Cntxt	Parent/ Sample Δ	Feature /Group	Date	Phase	Stone type	No	Wt (g)	Comments
5193	Well 5056	F9 sump/well	300-400	6c	10c Tunbridge Welss Sast (purple)	2	20	Worn
5194	Well 5196	F9 sump/well	300-400	6c	7b Downland flint	1	180	
5194	Well 5196	F9 sump/well	300-400	6c	7c Scorched flint	1	3	
5194	Well 5196 Δ25	F9 sump/well	300-400	6c	7a FCF	2	3	
5195	Well 5196 Δ26	F9 sump/well	270-420	6c	1a Ferruginous fine sast	34	94	Water-worn
5197	Well 5196 Δ27	F9 sump/well	325+	6b-c	7a FCF	5	24	
5198	Well 5058	F9 sump/well	370+	6c	7d Tertiary flint	1	54	
5198	Well 5058 Δ44	F9 sump/well	370+	6c	8a German lava	1	282	Quern frag. 55mm+ thick lower stone? Part grinding face
5198	Well 5058 Δ44	F9 sump/well	370+	6c	7a FCF	5	8	
5198	Well 5058 Δ44	F9 sump/well	370+	6c	7c Scorched flint	3	10	
5198	Well 5058 Δ44	F9 sump/well	370+	6c	18a Chalk	6	10	
5199	Pit 5095	F10 large pit	370+	6c	10a Tunbridge Wells sandstone	1	192	Water-worn
5201	PH08 pipe 5202 Δ32	F4 building	325-420	6c	1a Ferruginous fine sast	23	54	
5201	PH08 pipe 5202 Δ32	F4 building	325-420	6c	7a FCF	1	4	
5201	PH08 pipe 5202 Δ32	F4 building	325-420	6c	7c Scorched flint	1	2	
5201	PH08 pipe 5202 Δ32	F4 building	325-420	6c	7d Tertiary flint	2	4	
5204	Ditch 5205	F1 central ditch	70-150	4	7e Flint pebble	1	118	
5206	Ditch 5207	F3 ditch W corner	350-420	6c	7a FCF	5	40	
5206	Ditch 5207	F3 ditch W corner	350-420	6c	13a Lodsworth lower greensand	1	130	Quern frag. ?Upper stone, 25nn thick. Worn face
5208	Ditch 5209	F3 ditch W corner	370-420	6c	13a Lodsworth lower greensand	1	54	Quern frag, part grinding face
5208	Ditch 5209	F3 ditch W corner	370-420	6c	13b Lower greensand	1	392	Quern frag. 40mm thick. Part grinding face

Cntxt	Parent/ Sample Δ	Feature /Group	Date	Phase	Stone type	No	Wt (g)	Comments
5210	Ditch 5211	F1 central ditch	70-250	4	7a FCF	1	62	
5212	Well 5154	F9 sump/well	370+	6c	7a FCF	1	3	
5212	Well 5154	F9 sump/well	370+	6c	1a Ferruginous fine sast	1	184	
5212	Well 5154 V29	F9 sump/well	370+	6c	8a German lava	14	700	Quern frags. 22mm thick. Part grinding faces
5212	Well 5154 Δ29	F9 sump/well	370+	6c	7a FCF	17	98	
5212	Well 5154 Δ29	F9 sump/well	370+	6c	1a Ferruginous fine sast	4	14	
5212	Well 5154 Δ29	F9 sump/well	370+	6c	1c Hard fine ferruginous sast	11	52	
5212	Well 5154 Δ29	F9 sump/well	370+	6c	10a Tunbridge Wells sandstone	1	108	
5217	PH11 pipe 5137 Δ36	F4 building		RB	1a Ferruginous fine sast	1	2	
5217	PH11 pipe 5137 Δ36	F4 building		RB	7a FCF	3	4	
5217	PH11 pipe 5137 Δ36	F4 building		RB	7c Scorched flint	1	1	
5223	PH08 pipe 5202 Δ37	F4 building		RB	1a Ferruginous fine sast	16	66	
5223	PH08 pipe 5202 Δ37	F4 building		RB	1b Ferruginous sast?	5	14	
5223	PH08 pipe 5202 Δ37	F4 building		RB	7d Tertiary flint	4	26	
5225	Well 5056	F9 sump/well	370+	6c	18a Chalk	1	498	
5225	Well 5056	F9 sump/well	370+	6c	19a Shelly lmst/Sussex marble	1	2532	Burnt/scorched
5225	Well 5056	F9 sump/well	370+	6c	4a Coarse ferruginous sandstone	1	560	Friable, rounded
5225	Well 5056	F9 sump/well	370+	6c	7b Downland flint	1	846	
5225	Well 5056	F9 sump/well	370+	6c	9a Ferruginous conglomerate	1	768	Burnt
5225	Well 5056	F9 sump/well	370+	6c	19a Shelly lmst/Sussex marble	1	1080	
5225	Well 5056	F9 sump/well	370+	6c	7d Tertiary flint	1	484	water-worn

Cntxt	Parent/ Sample Δ	Feature /Group	Date	Phase	Stone type	No	Wt (g)	Comments
5225	Well 5056	F9 sump/well	370+	6c	13c Eastbourne-type greensand	1	774	Quern frag. Upper stone. 32mm thick edge, 42mm toward centre. **Retained**
5225	Well 5056 SF566	F9 sump/well	370+	6c	18a Chalk	1	1	Fossil braciopod
5225	Well 5056 Δ39	F9 sump/well	370+	6c	13a Lodsworth lower greensand	1	426	Quern frag. Upper stone with dressed /grooved grinding face. 30mm thick edge, 26mm thick toward centre. **Retained**
5225	Well 5056 Δ40	F9 sump/well	370+	6c	18a Chalk	1	2	
5225	Well 5056 Δ50	F9 sump/well	370+	6c	19a Shelly lmst/Sussex marble	4	1094	Weathered
5225	Well 5056 Δ50	F9 sump/well	370+	6c	13b Lower greensand	1	590	Quern frag. Upper stone, early/thick - 60mm. Radial grooves on grinding face. **Retained**
5225	Well 5056 Δ50	F9 sump/well	370+	6c	7c Scorched flint	45	238	
5225	Well 5056 Δ50	F9 sump/well	370+	6c	7a FCF	21	164	
5225	Well 5056 Δ50	F9 sump/well	370+	6c	7d Tertiary flint	6	30	
5225	Well 5056 Δ50	F9 sump/well	370+	6c	1a Ferruginous fine sast	26	102	water-worn
5225	Well 5056 Δ50	F9 sump/well	370+	6c	4a Coarse ferruginous sandstone	31	52	Rounded, friable
5225	Well 5056 Δ50	F9 sump/well	370+	6c	13b Lower greensand	1	386	Quern frag. Lower stone? 35mm thick
5225	Well 5056 Δ50	F9 sump/well	370+	6c	13b Lower greensand	1	464	Quern frag. Upper stone? 41mm thick
5226	Well 5056	F9 sump/well	300-370	6b-c	10b Tunbridge wells Sast (white/grey)	1	266	Cobble
5226	Well 5056	F9 sump/well	300-370	6b-c	13b Lower greensand	1	280	Quern frag. Lower stone. 22mm thick edge, 30mm thick toward centre. **Retained**
5226	Well 5056 Δ40	F9 sump/well	300-370	6b-c	2a Wealden clay ironstone	3	336	

Cntxt	Parent/ Sample Δ	Feature /Group	Date	Phase	Stone type	No	Wt (g)	Comments
5226	Well 5056 Δ40	F9 sump/well	300-370	6b-c	13b Lower greensand	1	76	friable, amorphous
5226	Well 5056 Δ40	F9 sump/well	300-370	6b-c	18a Chalk	1	588	Weathered
5226	Well 5056 Δ40	F9 sump/well	300-370	6b-c	19a Shelly lmst/Sussex marble	1	348	Irreg
5226	Well 5056 Δ40	F9 sump/well	300-370	6b-c	7a FCF	32	402	Angular
5226	Well 5056 Δ40	F9 sump/well	300-370	6b-c	7c Scorched flint	17	38	Angular
5226	Well 5056 Δ40	F9 sump/well	300-370	6b-c	7d Tertiary flint	25	50	Worn but angular
5226	Well 5056 Δ40	F9 sump/well	300-370	6b-c	18a Chalk	5	16	Rounded, friable
5228	PH 5229	F4 building	post 400	6c/7	13b Lower greensand	1	182	Quern frag. Up/Lo stone? 54mm+ thick. Edge re-used for sharpening?
5228	PH 5229	F4 building	post 400	6c/7	12a Coarse quartzitic sandstone (Millstone Grit)	1	178	Quernuern frag. Up/Lo stone? 41mm thick. Part grinding face
5231	PH13 pipe 5232	F4 building	270-350	6	1c Hard fine ferruginous sast	1	50	Worn
5231	PH13 pipe 5232	F4 building	270-350	6	2a Wealden clay ironstone	1	30	Worn
5231	PH13 pipe 5232	F4 building	270-350	6	10a Tunbridge Wells sandstone	1	30	
5245	PH04 pipe 5246	F4 building	300-400	6b-c	13b Lower greensand	1	442	Quern frag. Upper stone. 65mm thick outer edge, 50mm toward centre. Thick/early. **Retained**
5245	PH04 pipe 5246 Δ42	F4 building	300-400	6b-c	7a FCF	25	194	
5245	PH04 pipe 5246 Δ42	F4 building	300-400	6b-c	7c Scorched flint	8	16	
5245	PH04 pipe 5246 Δ42	F4 building	300-400	6b-c	7d Tertiary flint	19	72	
5245	PH04 pipe 5246 Δ42	F4 building	300-400	6b-c	1b Ferruginous sast?	2	12	
5247	PH07 pipe 5129 Δ43	F4 building		RB	7a FCF	9	92	
5248	PH04 pipe 5246	F4 building	270-400	6b-c	7a FCF	1	8	

Cntxt	Parent/ Sample Δ	Feature /Group	Date	Phase	Stone type	No	Wt (g)	Comments
5248	PH04 pipe 5246 Δ49	F4 building	270-400	6b-c	7a FCF	17	102	
5248	PH04 pipe 5246 Δ49	F4 building	270-400	6b-c	7c Scorched flint	4	18	
5248	PH04 pipe 5246 Δ49	F4 building	270-400	6b-c	7d Tertiary flint	14	42	Angular river gravels
5261	PH1 5117	F4 building	250-350	6	7a FCF	1	6	
5262	PH1 pipe 5266	F4 building	270-400	6	7a FCF	1	36	
5262	PH1 pipe 5266 Δ52	F4 building	270-400	6	7a FCF	4	18	
5262	PH1 pipe 5266 Δ52	F4 building	270-400	6	7d Tertiary flint	2	8	
5263	PH1 5117 Δ54	F4 building	300-370	6	15a Wealden siltstone	1	66	Worn
5264	PH1 5117	F4 building	150-270	5-6	16a Kimmeridge shale	1	4	Slither
5264	PH1 5117	F4 building	150-270	5-6	7d Tertiary flint	1	2	
5269	PH1 5117	F4 building	270+	6	7a FCF	4	740	
5225	Well 5056 Δ53	F9 sump/well	370+	6c	1a Ferruginous fine sast	47	106	Worn
5225	Well 5056 Δ53	F9 sump/well	370+	6c	1b Ferruginous sast?	10	14	

16.3.1 Assessment of the faunal remains by Dr Ellie Williams

Introduction

A small assemblage of bone was submitted for assessment from the archaeological excavation undertaken in 2014 at Bridge Farm, Barcombe Mills, East Sussex. The faunal remains derived from a series of features dated to the Roman period, with the majority recorded from contexts related to a well/pit (F9). Preservation was generally reasonable to good across the different contexts, but there was a high degree of fragmentation, including from modern breaks. Despite these taphonomic issues, a total of 204 bones and bone fragments could be recorded, providing some valuable information on the consumption and use of animals at the site.

This rapid assessment presents some preliminary data ahead of a more extensive analysis. The main domestic mammals will be the focus here; the infrequent bird, amphibian, and small mammal remains will be considered at a later stage.

Methodology

The assemblage was identified to element and species with the aid of the reference collection stored at Canterbury Christ Church University. Where an element could not be identified to species, it was instead described as large mammal (cattle/equid), medium mammal (sheep/goat, deer, pig), or unidentified mammal. Information on butchery (chop or cut marks and position), gnawing (carnivore or rodent), burning and further modifications (e.g. bone working) was recorded.

The stage of bone fusion has been recorded for postcranial bones where possible, but a detailed assessment of age-at-death data for each of the species has not been undertaken at this time. This will form part of the larger report, along with a consideration of tooth wear data.

Results

From the 204 bone fragments analysed, elements from the following species were represented: cattle, equid, sheep/goat, pig, and red deer. A small number of bird, fish, amphibian and rodent bones were also retrieved, predominantly from flotation; with the appropriate reference collection, these will be examined in due course.

Table 1: *Number of Individual Specimens (NISP) for the mammals.*

Taxon	NISP	% identified NISP
Cattle	32	16
Sheep/goat	21	10
Equid	3	1.5
Pig	4	2
Red deer	1	0.5
Large mammal	16	8
Medium mammal	24	12
Unidentified Mammal	103	50
TOTAL	**204**	

Table 1 presents the Number of Individual Specimens (NISP) by taxon, and Table 2 also presents the figures for the Minimum Number of Individuals (MNI); cattle bones were the most frequent (n=32; MNI=2) followed by sheep/goat (n=21; MNI=1). Three well preserved equid bones (MNI=1) (see also table 2) could possibly indicate that horse meat was being consumed, although no evidence for butchery was recorded to consider processing in more detail. Only four pig bones (MNI=1) were identified (one possible ulna fragment, and three teeth); this relatively low number is unlikely to be a

result of differential preservation given that the more robust bones of pigs have a greater chance of survival. However, in considering the findings overall, it should be noted that 50% of the bone fragments were classed as 'unidentified mammal' and 20% only by general size.

Table 2: *Anatomical representation for the domestic mammals*

Skeletal element	Cattle	Sheep/goat	Equid	Pig
Horncore	1			
Cranium	1			
Mandible	2			
Atlas/Axis	2			
Scapula	3	1		
Humerus			1	
Radius			1	
Ulna				1
Carpal		1		
Pelvis	1			
Femur	4			
Tibia	2	1		
Astragalus				
Calcaneus	3	1		
Tarsal				
Metapodial	1	1		
Phalanx		1		
TOTAL	20	6		
MNI	2	1	1	1

Table 2 indicates that overall the skeletal elements for cattle and sheep/goat were distributed across most areas of the body; this seems to represent the different stages of processing and consumption. Although no cranial elements are recorded in Table 2 for sheep/goat, 13 loose teeth were recovered. It is notable that overall the more robust skeletal elements are represented; differential preservation is a key factor to consider here when considering human activity and patterns of disposal.

Butchery

Eight bones exhibited evidence for butchery. These were all rough chop marks; no smaller cut marks were identified. Of particular note was a similar pattern of butchery (chop) marks on two cattle scapulae from different individuals; the base of the spine had been chopped in a comparable position/manner, and suggests specialised carcass processing.

Burning, gnawing, and further modifications

10 bones showed evidence for burning (nine burned white, and one charred black). Only in the case of one possible pig ulna could this be identified to species. The remainder were from unidentified mammals.

Carnivore gnawing was recorded on eight bones from cattle (representing different parts of the skeleton), and equid (a humerus). Approaches to waste disposal clearly permitted access to certain faunal remains by dogs and/or foxes, providing some insight into how refuse was managed. It is notable, however, that no clear evidence for rodent gnawing was recorded; it will be interesting to examine whether different areas of the settlement site – or different periods in the site's history – exhibit greater evidence for rodent activity, and what this suggests about waste management strategies and sanitation both spatially and temporally.

One piece of red deer antler was recorded as chopped and worked; part of the surface was flattened, highly polished, and with regular grooves (possibly related to sharpening implements). This could suggest its use as a tool (Figure 1). One further piece of sheep/goat bone (likely from a tibial shaft) could have been worked into a point, but this is ambiguous.

Figure 1: *Worked deer antler (context 5226, find no. 575).*

Conclusion

This small bone assemblage would appear to represent domestic refuse including from food preparation. There are also other discarded bone remains, such as a piece of red deer antler possibly used as a tool, indicating that it is not just the remains of carcass processing/consumption represented within the well/pit feature (F9). The common domesticates (cattle, sheep/goat and pig) are all represented, with the MNI figures suggesting comparably low numbers of each taxon. The number of unidentified mammal remains should however be considered. The inclusion of equid remains raises interesting questions surrounding their role – possibly in relation to consumption – at the site.

A larger sample of skeletal remains would offer more scope for temporal and spatial patterns to be explored at this Roman settlement site. It is recommended that a full faunal remains analysis – to include the small mammal, bird, fish and amphibian bones – is undertaken. There are potentially important questions surrounding food provisioning and processing practices, waste management and sanitation, the use of animal remains in craft practices, and the role of different species in the diet.

16.3.2 Catalogue of the faunal remains by Dr Ellie Williams

Context	Feature	Sample No	Element	Species And/or Individual (E no.)	Side	Proximal Fusion	Distal Fusion	Number	Pathology, Modified, Butchery, Gnawing, Burning, Comments
5068	'J' in Wcnr	38	Tooth	Mammal				1	Frag of root
5083	F001		Metatarsal	Cow	R			1	Carnivore gnawing on distal end
5013	F003	4	Tooth: molar	Sheep/goat				1	
5269	F004 PH1		Tooth: upr molar	Sheep/goat	R			1	
5126	F004 PH6	35	Unidentified	Mammal				1	
5262	F004 pp 01	52	Unidentified	Mammal				3	Digested?
5144	F004 pp 02	23	Unidentified	Mammal				1	
5216	F004 pp 10		Tooth: molar	Cow				1	Fragments
5216	F004 pp 10	35	Tooth: molar	Cow				1	
5136	F004 pp 11		Unidentified	Mammal				1	Fragmented bone. Check context
5136	F004 pp 11		Unidentified	Mammal				1	Lots of small frags - one bone originally?
5197	F009 (3rd)	26	Calcaneus	Cow				1	
5197	F009 (3rd)	26	Unidentified	Mammal				1	White burning
5197	F009 (3rd)	26	Tooth: molar	Sheep/goat				1	
5085	F009 (4th)		Tooth: lwr molar	Sheep/goat	R			1	
5085	F009 (4th)		Horncore	Cow				1	Possible carnivore gnawing on distal end
5085	F009 (4th)		Tibia	Cow	R		F	1	Carnviore gnawing proximal end
5085	F009 (4th)		Femur	Cow				1	Check element: Carnivore gnawing
5085	F009 (4th)	7	Tooth: molar	Pig				1	M1/M2 worn
5085	F009 (4th)	7	Tooth: incisor	Cow				1	Worn
5085	F009 (4th)	7	Rib	Medium mammal				1	
5085	F009 (4th)	7	Vertebra	Large mammal		UF	UF	1	
5085	F009 (4th)	7	Long bone	Large mammal				1	White/grey burning
5085	F009 (4th)	7	Vertebra	Mammal		UF		1	

Context	Feature	Sample No	Element	Species And/or Individual (E no.)	Side	Proximal Fusion	Distal Fusion	Number	Pathology, Modified, Butchery, Gnawing, Burning, Comments
5085	F009 (4th)	7	Long bone	Medium mammal				1	
5085	F009 (4th)	7	Vertebra	Medium mammal				1	Facet only
5085	F009 (4th)	7	Carpal	Medium mammal				1	
5085	F009 (4th)	7	Scapula	Sheep/goat			F	1	Glenoid cavity
5085	F009 (4th)	7	Tibiofibula	Frog				1	
5085	F009 (4th)	7	Long bone	Frog?				1	
5085	F009 (4th)	7	Pelvis	Small mammal				1	Frog?
5085	F009 (4th)	7	Unidentified	Mammal				12	
5085	F009 (4th)	7	Long bone	Medium mammal				6	
5085	F009 (4th)	7	Long bone	Medium mammal				1	White burning
5085	F009 (4th)	7	Vertebra	Small mammal				1	Rodent? Check
5085	F009 (4th)	7	Carpal	Sheep/goat				1	Eburnation? OA
5085	F009 (4th)	7	Humerus	Mammal				1	CHECK
5198	F009 (4th)		Scapula	Cow	R			1	Fragmented: Chop on the distal-medial surface (medial to glenoid cavity)
5198	F009 (4th)		Pelvis	Cow	L			1	Check species: Carnivore gnawing
5198	F009 (4th)		Unidentified	Mammal				1	
5198	F009 (4th)	44	Tooth: molar	Sheep/goat				1	
5198	F009 (4th)	44	Tooth: incisor	Pig				1	
5198	F009 (4th)	44	Unidentified	Medium mammal				1	
5198	F009 (4th)	44	Unidentified	Mammal				4	Frags
5198	F009 (4th)	44	Vertebra	Large mammal		UF	UF	1	Cervical
5198	F009 (4th)	44	Vertebra	Fish				1	
5198	F009 (4th)	44	Unidentified	Mammal				1	White burning
5198	F009 (4th)	44	Skull	Medium mammal				1	

Context	Feature	Sample No	Element	Species And/or Individual (E no.)	Side	Proximal Fusion	Distal Fusion	Number	Pathology, Modified, Butchery, Gnawing, Burning, Comments
5198	F009 (4th)	44	Phalange	Sheep/goat				1	Possibly sheep/goat
5198	F009 (4th)	44	Unidentified	Mammal				10	Some black burning. Lots of small frags
5198	F009 (4th)	44	Vertebra	Mammal				1	Possible transverse process of a vertebra
5198	F009 (4th)	44	Unidentified	Mammal				4	Frags
5212	F009 (4th)		Humerus	Large mammal				1	Possibly cow: Chop mark adjacent to deltoid tuberosity
5212	F009 (4th)		Femur	Cow			F	1	
5212	F009 (4th)		Radius	Equid	R		F	1	
5212	F009 (4th)		Scapula	Cow	R			1	Chop on distal end of spine
5212	F009 (4th)		Tooth: premolar	Cow				1	Just crown - unerupted
5212	F009 (4th)		Tooth: incisor	Equid				1	
5212	F009 (4th)		Calcaneus	Cow	R	F		1	
5212	F009 (4th)		Femur	Large mammal				1	
5212	F009 (4th)		Tibia	Cow	R	F		1	
5212	F009 (4th)	29	Tooth: incisor	Sheep/goat				2	
5212	F009 (4th)	29	Unidentified	Mammal				1	Frags
5212	F009 (4th)	29	Unidentified	Mammal				2	Frags
5212	F009 (4th)	29	Long bone	Large mammal				1	Long bone?
5212	F009 (4th)	29	Sternum	Medium mammal		UF		1	Sternum?
5212	F009 (4th)	29	Unidentified	Mammal				4	
5212	F009 (4th)	29	Long bone	Medium mammal				1	
5212	F009 (4th)	29	Tooth	Large mammal				1	Root
5212	F009 (4th)	29	Rib	Large mammal				1	
5212	F009 (4th)	29	Femur	Cow		F		1	
5212	F009 (4th)	29	Tooth: molar	Cow				3	
5212	F009 (4th)	29	Tooth: DP4	Cow				1	Worn

Context	Feature	Sample No	Element	Species And/or Individual (E no.)	Side	Proximal Fusion	Distal Fusion	Number	Pathology, Modified, Butchery, Gnawing, Burning, Comments
5212	F009 (4th)	29	Tooth: incisor	Cow				1	
5212	F009 (4th)	29	Tooth: incisor	Cow				1	Unerupted crown
5212	F009 (4th)	29	Tooth: molar	Sheep/goat				1	
5212	F009 (4th)	29	Tooth: incisor	Sheep/goat				1	Very worn
5212	F009 (4th)	29	Long bone	Medium mammal				3	
5212	F009 (4th)	29	Scapula	Large mammal				1	Possible scapula
5212	F009 (4th)	29	Unidentified	Mammal				9	
5212	F009 (4th)	29	Unidentified	Mammal				9	Lots of frags and fresh breaks
5225	F009 (5th)		Tooth: incisor	Pig				1	
5225	F009 (5th)		Tooth: upr molar	Cow				1	
5225	F009 (5th)		Long bone	Medium mammal				1	
5225	F009 (5th)		Humerus	Large mammal				1	Small fragment: Chop marks
5225	F009 (5th)		Vertebra	Mammal		UF	UF	1	Flot 50
5225	F009 (5th)		Calcaneus	Cow	R			1	Carnivore gnawing on proximal end
5225	F009 (5th)		Scapula	Cow	L			1	Poss. same individual as 5198; similar size and butchery, chop on the distal-medial surface (medial to glenoid cavity); chop on distal end of spine . Carnivore gnawing no proximal end
5225	F009 (5th)		Vertebra	Cow				1	Atlas
5225	F009 (5th)		Humerus	Equid	R	UF	F	1	Partial supratrochlear foramen?? Carnivore gnawing
5225	F009 (5th)	50	Metatarsal	Sheep/goat	L			1	Chop marks on proximal diaphysis and epiphysis
5225	F009 (5th)	50	Vertebra	Medium mammal				1	Possibly lumbar
5225	F009 (5th)	50	Unidentified	Mammal				4	Burning - white / grey / black fragments
5225	F009 (5th)	39	Rib	Medium mammal				1	

Context	Feature	Sample No	Element	Species And/or Individual (E no.)	Side	Proximal Fusion	Distal Fusion	Number	Pathology, Modified, Butchery, Gnawing, Burning, Comments
5225	F009 (5th)	50	Vertebra	Mammal				1	Possible transverse process of a vertebra
5225	F009 (5th)	50	Mandible	Cow	L			1	Young; possible articular process
5225	F009 (5th)	50	Femur	Bird (E1)	L			1	
5225	F009 (5th)	50	Femur	Bird (E1)	R			1	
5225	F009 (5th)	50	Tibiotarsus	Bird				1	
5225	F009 (5th)	50	Ulna?	Pig?				1	White/grey burning
5226	F009 (6th)		Mandible	Cow	L			1	Fragmented into three: Small cut mark on proximal-lateral surface
5226	F009 (6th)		Femur	Cow	L	F		1	
5226	F009 (6th)		Antler	Red deer				1	Chopped/worked
5226	F009 (6th)		Astragulus	Cow	L			1	
5226	F009 (6th)		Scapula	Large mammal				1	Section of glenoid cavity and lateral edge: Chop mark on lateral edge
5226	F009 (6th)		Calcaneus	Sheep/goat	R			1	
5226	F009 (6th)		Vertebra	Large mammal				1	Unfused body
5226	F009 (6th)		Skull	Large mammal				1	
5226	F009 (6th)		Long bone	Large mammal				1	
5226	F009 (6th)		Vertebra	Mammal				2	Unfused body parts - x 2 fragments but probably same animal
5226	F009 (6th)		Unidentified	Mammal				4	
5226	F009 (6th)		Tibia	Large mammal		UF		1	Possibly fragment of proximal epiphysis
5226	F009 (6th)		Phalange	Large mammal				1	
5226	F009 (6th)		Tooth: lwr molar					3	3 individual teeth
5226	F009 (6th)	40	Ulna	Rodent				1	Possibly rodent - need reference collection
5226	F009 (6th)	40	Radius	Rodent				1	Possibly rodent
5226	F009 (6th)	40	Long bone	Frog?				1	
5226	F009 (6th)	40	Unidentified	Mammal				5	

Context	Feature	Sample No	Element	Species And/or Individual (E no.)	Side	Proximal Fusion	Distal Fusion	Number	Pathology, Modified, Butchery, Gnawing, Burning, Comments
5226	F009 (6th)	40	Unidentified	Mammal				1	White burning
5226	F009 (6th)	40	Tooth	Sheep/goat				1	Possibly sheep/goat
5226	F009 (6th)	29	Unidentified	Mammal				8	
5226	F009 (6th)	40	Tooth: lwr molar	Sheep/goat				3	
5226	F009 (6th)	40	Rib	Medium mammal				1	
5226	F009 (6th)	40	Tarsometatarsus	Bird				1	
5226	F009 (6th)	40	Long bone	Bird				1	
5226	F009 (6th)	40	Long bone	Medium mammal				2	
5226	F009 (6th)	40	Unidentified	Mammal				2	
5226	F009 (6th)	40	Skull	Cow				1	Zygomatic
5226	F009 (6th)	40	Axial	Bird (E2)				1	
5226	F009 (6th)	40	Sternum	Bird (E2)				1	
5226	F009 (6th)	40	Pelvis	Bird (E2)				1	
5226	F009 (6th)	40	Tibia?	Sheep/goat				1	Worked into a point?
5226	F009 (6th)		small bones						
5167	F010 (3rd)	41	Unidentified	Mammal				1	White burning
5102	F010 top	44	Unidentified	Mammal				2	Frags
5102	F010 top	44	Unidentified	Mammal				1	Young; unfused
5181	F011		Unidentified	Mammal				1	White - bleached? Section of mandible?
5181	F011		Unidentified	Mammal				1	White burning
5185	F011		Vertebra	Cow			UF	1	Axis

16.10.1 Report on waterlogged timbers by Damion Goodburn

ANALYSIS ON THE ROMAN PERIOD WOODWORK RECOVERED IN 2014

D. M. Goodburn BA, Phd; Archaeological Woodwork Specialist (26/4/2020)

Key background information relating to the Roman woodwork found at Bridge Farm, Trench 5, and aims of this specialist woodwork analysis report

The site location, limited water logging for the small sample of lifted timbers and possible reasons for further excavation of potentially valuable timbers from closely associated features

The 2014 excavation lies in low lying land close to the flood plain of the River Ouse, but waterlogged horizons preserving the ancient woodwork discussed in this report, were now only found in deep cut features c. 0.8m or more down from the modern field surface. This modern field surface has been ploughed and lies at c. + 4.6m OD, the nature of the decay of the timber elements found suggest to this writer that relatively recent drainage during agricultural improvement works may be the cause of some of the decay. However, several of the very lowest timbers found and also lifted for detailed recording and study were still fairly well preserved, though this level of survival is likely to be gradually deteriorating.

The surviving timbers include some material that is very rare nationally and are from a county with little surviving woodwork of the Roman period. Given a larger sample of preserved timbers from associated deep cut features close dating using tree-ring study may be possible. Therefore the reasons for further, closely targeted, excavation of timber bearing, deep features are strong, if resources for the work can be found at some point in the future.

Evidence of a large Roman period building supported by substantial earth-fast posts; the source of the unusual reused timbers and informative off cuts

Excavations in 2014 at Bridge Farm, by the CAP revealed evidence of a moderately large rectangular building in Trench 5. This took the form of 13 large postholes or 'post pits', some over 1m across and around 1.0m deep (Fig. 1). They were arranged in two parallel rows of 6 running c. NE –SW, spaced c. 6.4m apart, centre to centre, with one centrally placed in what appears to have been a southern, end wall. The decayed traces of post pipes up to c. 0.45m across were partially exposed in these deep features and then reburied in most cases. A post pipe 0.45m across may be a relict of a timber once approaching 0.45m or c.1 'cubit' square, a common size for larger oak structural timbers found on waterlogged Roman sites in SE England (eg. Goodburn 2008, 48-52; Stephenson 2008, 45). It is fairly clear that the recurrence of this cubit width dimension, also common in planking sawn from squared baulks, would fit well with lists of common standard dimensions for timber given in Diocletian's maximum price edict (Meiggs 1982, 366). Worked oak timbers of greater width of the Roman period found in Britain are relatively rare.

Just under 1.0m to the west of the western line of posts pits, a less regular series of 4 smaller post holes were found running parallel on a possible NE–SW line (Fig. 15). It appears possible that the large posts implied were aisle posts of a large aisled building and it might just be the case that the smaller outlying, parallel post holes were relicts of the external side walls of the F4 building. The existence of any equivalent external wall posts on the east side is uncertain as the area appears to have lain just outside the excavation trench or on its very edge. If the symmetrical narrow side aisles truly existed

then they would imply a building in total of c. 8.4m wide externally. The length of the building implied from the post pit layout is c. 15.5 to 16.0m. However, in practice these tentative reconstructed dimensions do not take account of any possible overhanging timber elements such as roof eaves or jetties. The suggested dimensions only give a very general impression of the possible size of structure F4.

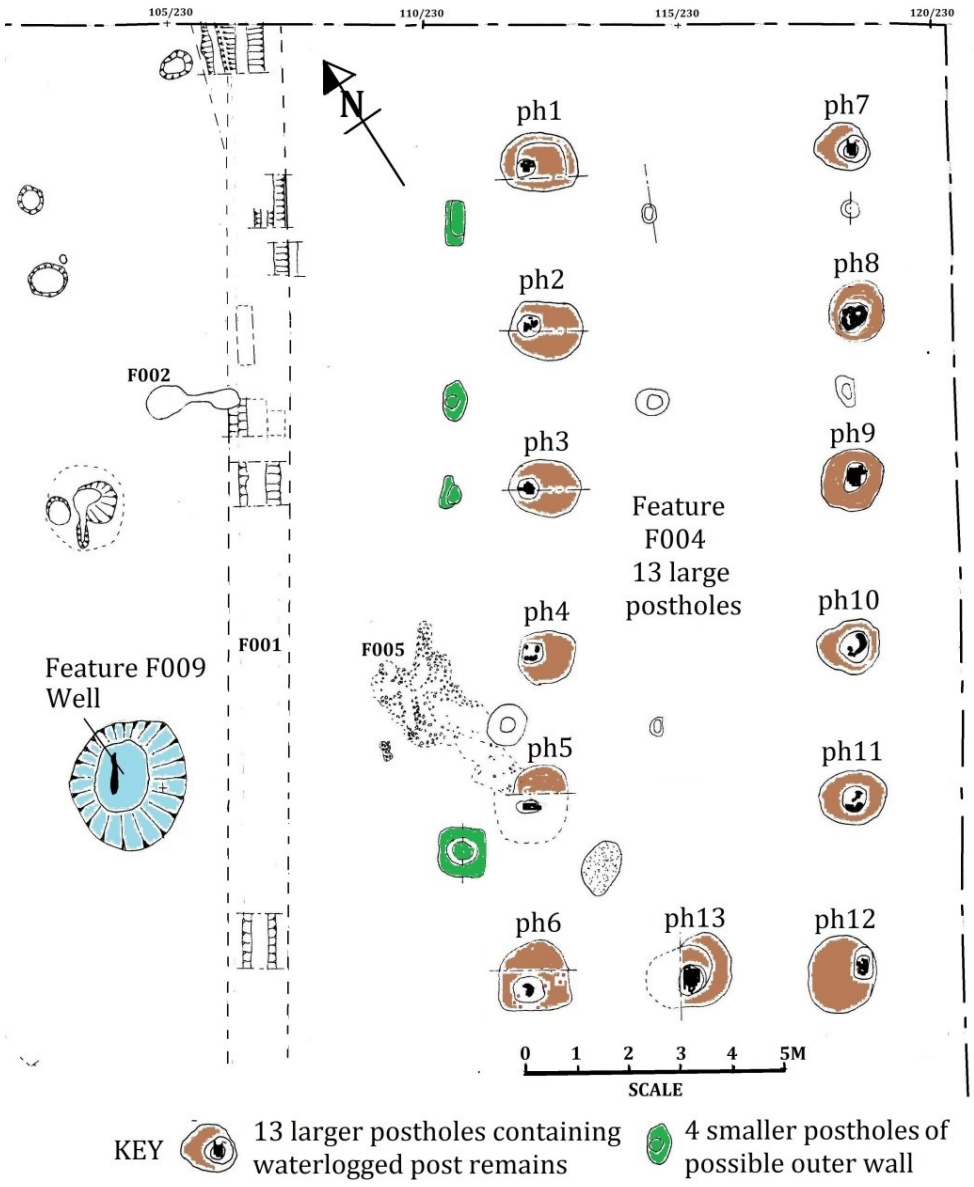

Fig. 1. Plan showing postholes and well with in situ timbers

Other contexts yielding waterlogged Roman period timber

Just to the west of the building F004, a little ancient waterlogged wood also survived in an oval well cut F009 (Fig. 15). The other cut features did not produce waterlogged woodwork, though some were not bottomed due to problems of access, localised iron panning and limited resources. Full excavation of some of the deeper features, might yield more important early woodwork but considerable targeted effort and resources would be needed to revisit these features.

The large, more intact, lifted waterlogged woodwork - the focus of this report

This report sets out to summarise and assess the woodworking aspects of the waterlogged woodwork excavated and lifted from three sample post pits Post Holes 1, 9 and 11 of Feature 4 (Fig. 15). It also covers fragments from the well, Feature 9. The larger, more diagnostic, pieces of woodwork are the focus of this report as many of the smaller fragments lifted from the post holes are very decayed and thus provide relatively little information. Indeed, as some of the post bases clearly broke into many fragments along the natural planes of weakness, the medullary rays, a meaningful count of the lifted material is not possible.

For wider stratigraphic and other site information readers must consult the main body of this report.

Roman structural woodworking in the NW section of the empire: and the range of the comparative archaeological material,

For the public and even many archaeologists, Roman buildings and other structures are assumed to have been generally of stone and, or tile, and only rarely of timber. As structures of timber, roundwood and earthy materials do not survive well from the period on most sites, the use of timber in Roman construction is still relatively little studied or presented in regions of Britain, so any finds that shed light on these themes are disproportionately important. However, excavation in the waterlogged zones of Roman towns such as London and Carlisle and the fort site of Vindolanda, indicate how dominant construction in perishable materials actually was, particularly in the earlier part of the occupation. From both those large settlements and several smaller sites, we have quite a large sample of published Roman period structural woodwork recorded in detail systematically analysed and closely dated, with which to compare the assemblage from Bridge Farm. It is also clear that even masonry buildings had many timber elements, in roofs, floors, partitions and other features.

For London this corpus of comparative evidence includes many detailed published studies of large assemblages of structural woodwork and others at the grey literature stage or 'In Prep', covering several thousand structural timbers, not including woodwork directly involved in waterfront construction (e.g. Goodburn 1991; Brigham and Goodburn et al 1995; Goodburn and Goffin *et al* 2011). The range and volume of surviving structural woodwork from rural Roman sites is very much smaller, but some of this material also helps to set the Bridge Farm assemblage in context, both published and archived material (e.g. Biddulph and Stansbie *et al* 2012; Goodburn 2019a; 2019b; 2019c and In Prep). In any attempt to sum up what is known in general about Roman period woodworking in Britain of relevance to this particular project from archaeological finds, it must be clearly noted that the decorative moulding of woodwork is atypical, though it is known in some smaller scale works of joinery and furniture making. Carved and planed mouldings are known in non-structural woodwork though it is rare even there, e.g. a moulded couch or bed end rail (Ridgeway, 2009, 33) and there are also well known wall painting images of moulded furniture from Herculaneum and Pompeii.

By contrast in structural scale woodwork, loosely 'carpentry', only three London-region sites have yielded a small sample of Roman period, moulded larger timbers, where all but one example, were moulded length wise on their edges (Fig. 2). The nearest parallel to the two end-moulded structural timbers from Bridge Farm is a solitary example found by Albion Archaeology in a Roman well at the Marston Park site in Bedfordshire (H. Duncan, pers. comm. and Goodburn, In Prep.) *Figure 2* attempts a graphic outline summary of the key features of this comparative material, which was all wrought in oak.

Practical experimentation in aspects of Roman structural woodworking has also furthered our understanding in several areas, such as the recognition of typical tool marks of the period and an

appreciation of the logistics and varied nature of woodland resources, i.e. treescapes, used (Goodburn 2000). The varied nature of the treescapes reconstructed from woodwork found, from tall, dark 'wildwood' to hedgerows and various types of managed woodland and orchards has also been helped by the work of archaeobotanists and tree-ring specialists. Finally, recent work in this field is beginning to show that there are indeed marked regional variations in both treescapes and working practices across Roman Britain, even over relatively short distances. For example, we can definitely see this in the marked contrasts in the woodwork excavated from Greater London and the Cambridge area (Goodburn 2019b & c). As yet Sussex has produced very little woodwork of the Roman period, highlighting the value of even small assemblages, such as the assemblage from this project.

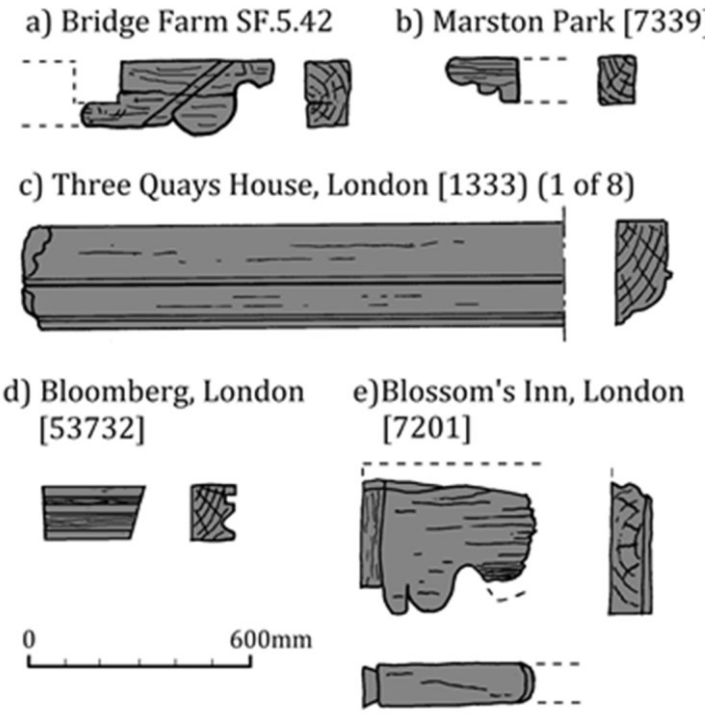

Fig. 2 Graphic outline summary of moulded Roman-period timber beam forms discovered in Britain

The general range of the woodwork found in trench 5 At Bridge Farm

The general range of woodwork found included, the decayed bases of substantial earth-fast oak posts originally up to c. 0.45m across ('a cubit') and set at least 1m into the earth. These imply that the 13 post pits found were part of a substantially built moderately tall timber building over c 6.5m wide and c.15.5-16m long (Fig. 1). The surviving timbers in PH1 and PH9 were carefully lifted and found to include the very decayed post bases with often better-preserved remains of supporting post pad and post chocking timbers. These included a surprising assortment of sizes and forms of oak timber including two jointed and moulded beam ends SF.5.42 and 5.78 (Figs. 3, 4 & 6). These timbers had decorative ogival shapes cut into their ends and the remains of a deep lap joint, or less likely a tenon, truncated by their reuse at the other. The presence of the major joint would have made it easier to cross cut the timbers at that point.

Currently these timbers are without exact parallels from other sites in Roman Britain, although a small number of moulded Roman structural timbers have been recorded from other sites. It currently seems possible that these rare reused elements were originally the decorative ends of rafters in a large building local to the site prior to the building of F4 *(see figure 5)* The two moulded timbers are likely to have come from a building relatively close by as oak timber is heavy to transport even when dry and seasoned.

Other key timbers from PH9 included the obliquely sawn end of a large, rectangular hewn (axe-shaped) oak beam SF.5.79. This item was cut from the very knotty, crown end of a medium sized oak which was clearly barely tall enough for the job and thus this large off cut sheds light on local woodmanship and timber conversion practice at the time.

Fig. 3. Photographs of the 2 timbers with ogival carved ends

PH1 yielded the moderately well-preserved end of a thick plank of oak also cut obliquely, timber SF.5.65, the original purpose of which is not certain.

Although the assemblage of lifted Roman period timbers from the Bridge Farm project is, by national standards, very small it does shed important light on the form of otherwise unknown, timber architectural details, local treescapes and heavy woodworking practises. None of the timber examined was straight grained and narrow ringed with an origin in large 'wildwood-type' trees that are often evidenced in other assemblages of Roman structural woodwork from SE England. Therefore, the local treescapes implied are of various forms of more open managed woodland and they probably included many oaks growing in hedges, and possibly wood pasture. This runs parallel to similar evidence from the London region where large wildwood timber is much less common from the mid second century as the landscape was more intensively managed (Goodburn 2000).

Methodology of the recording the lifted woodwork

After the planning of the partially exposed timber remaining in situ, timbers from PH 1, PH9, PH11 and well F9 were lifted for further recording and sampling in due course. Some of the detailed recording was delayed until after the washing and conservation of the lifted timbers. Before and during the conservation of the timbers a variety of photographs and sketches were made by CAP team members and the Durham Conservation team. These included 1:1 scale drawings made by C. Gonzalez-Hernandez of post pad timbers SF.5.78, SF.5.42, and decayed post base SF.5.41 from PH9 (see Appendix).

Following conservation, this writer was commissioned to examine the timbers first hand, to add any missing technological information and assess their value for possible tree ring dating in July 2019. Additional notes were appended to copies of the various records provided and one additional scale timber drawing was made of timber SF.5.79 also from PH9.

The examination showed that all the lifted timbers seen were of 'oak' (i.e. our two, closely similar native species, or their many very similar hybrids, not distinguishable as waterlogged ancient timber). Very little sapwood survived on the edges of the rot resistant heartwood and unfortunately none of the timbers were found suitable for tree ring study. This was due to the 'parent trees' being of moderate size and medium to fast grown, with less than the required 50 annual rings surviving, or

greatly distorted grain from multiple knots. This situation is often the case with mid or later Roman structural woodwork as many of the accessible wildwood-type, high woodland had been converted into rather open manage woodland or even farmland with hedges and pasture trees. The more open growing conditions, with more light and nutrients for many parent trees, typically produces comparatively fast-grown, wide ringed and 'branchy' (i.e. knotty) timber, compared to the wildwood - type woodland more commonly harvested for larger structural timber in the early Roman period as indicated in the large London and Carlisle assemblages.
The sample of lifted woodwork from the Bridge Farm Trench 5 excavation has been recorded to a standard broadly in keeping with that set out in Heritage England Guidelines on waterlogged wood (Brunning, 1996).

Quantification

Any count of timbers or fragments there-of, listed here is bound to be highly approximate and very inflated for reasons outlined above. The final count of significant lifted material is c.11 items from, PHs 1, 9 and 11 of building F4 and well feature F9.

THE KEY WOODWORK FOUND AND LIFTED FOR FURTHER RECORDING DISCUSSED IN GROUPS ASSOCIATED WITHIN CUT FEATURES

A forensic approach

Where the quality of survival warrants it the timbers are discussed below in 'forensic' detail as their rarity demands. All surviving evidence is considered, but where the material was highly decayed it has been treated briefly.

Woodwork found in Post Hole 1, Building F004

A decayed post base SF.5.56

This post pit in the NE corner of building F4 included the very decayed heartwood core of an oak post in several fragments, SF.5.56, with no original surfaces and a largest fragment dimension of 158mm. This was all that survived from what would have once been a very substantial upright timber.

A section of planking SF.5.65

A fragment of thick, tangentially-faced, oak planking SF.5.65 was also found in this post pit. This item was very decayed and survives c.340mm long by 155mm wide and 55mm thick. It is clear that its original length, thickness and width would have been greater when it was placed in the post pit. Though one end was irregularly decayed the other was deliberately cut at an angle of c.70 degrees, but for what purpose is uncertain. No tool mark traces survived but it is likely that this timber was sawn out originally, as most better preserved Roman planking has been found to be (e.g. Goodburn 1995, 42-45). It is also just possible that such a timber offcut might have been used to skid the base of a long heavy post into position as it was reared in the deep post hole.

Woodwork found in Post Hole 9, Building F004

SF.5.41: a decayed post base

This large post pit on the east side of the rectangular building, contained the bulk of the most interesting sections of worked timber found and lifted. The very rot-eroded oak heartwood core of a post baseSF.5.41 was found towards the bottom of the post pit with none of its original surfaces surviving. It was clearly very much smaller than when it was originally installed, with no dimension now exceeding 175mm. Beneath the post a series of post-pad or 'levelling-up' chocks of oak timber were found of considerable interest worth describing and discussing individually here.

SF.5.42: a very rare reused post pad timber with a decorative ogival end and relict joints

Timber SF.5.42 was the reused end of a rectangular section oak beam. It had one original end carved to an ogival terminal whilst the other had been cross cut for reuse in antiquity and was very weathered. It measured 460mm long by 185mm wide and 105mm maximum thickness after coservation. Opposite the carved ogival end the remains of a truncated, deep cross halving joint, or less likely a 'bare faced tenon', survived; the former being a well-known joint in Roman woodworking. The halving would have accommodated a beam running at 90 degrees to timber in its primary use. The original function of the beam end has been considered with repeated sketching of possible joining timbers for some time by this writer and others. Initially its use as a joist in some form of jetty was considered but is now thought unlikely due to its form and the oblique housing joint discussed below (Fig. 4).

Whilst too little of the timber survives for an absolutely definite reconstruction of its original function, the strongest candidate may well be that it was a decorative principal rafter end from the roof of a large high status building with walls of stone, earthy materials such as pise or mud brick (known from Roman London and elsewhere), and/or various forms of heavy timber frame. Even in relatively recent timber roofs the bottom ends of the rafters visible externally under the eaves were often scalloped to a semi- decorative form. The key indicative feature suggesting probable rafter end use is a curious c. 25mm deep diagonal slot or 'housing joint' that survives on one face (Fig. 4).

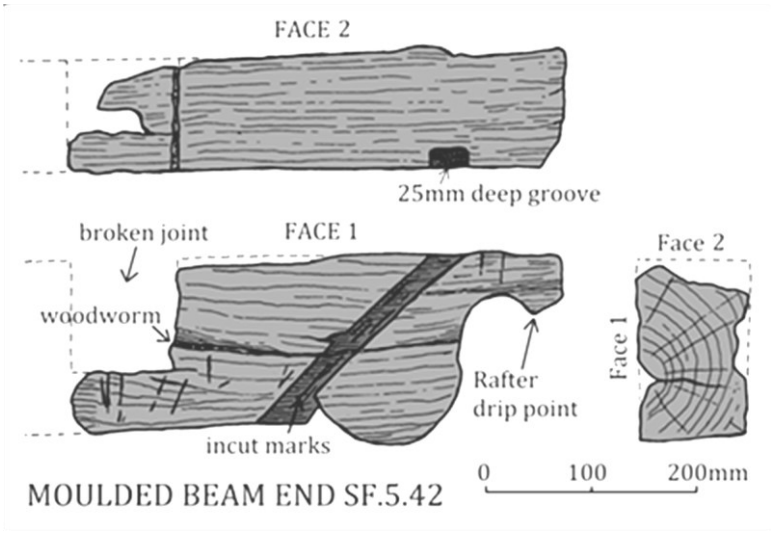

Fig. 4. Ogival moulded timber SF.5.42

A plausible interpretation of this diagonal feature is that it may have been used to locate a lintel plank for a window opening, or a high door, just under the eaves of the parent building (Fig. 5).

If the housing joint was the location of a horizontal window opening then the implied roof pitch for the principal rafter would have been c.40 degrees

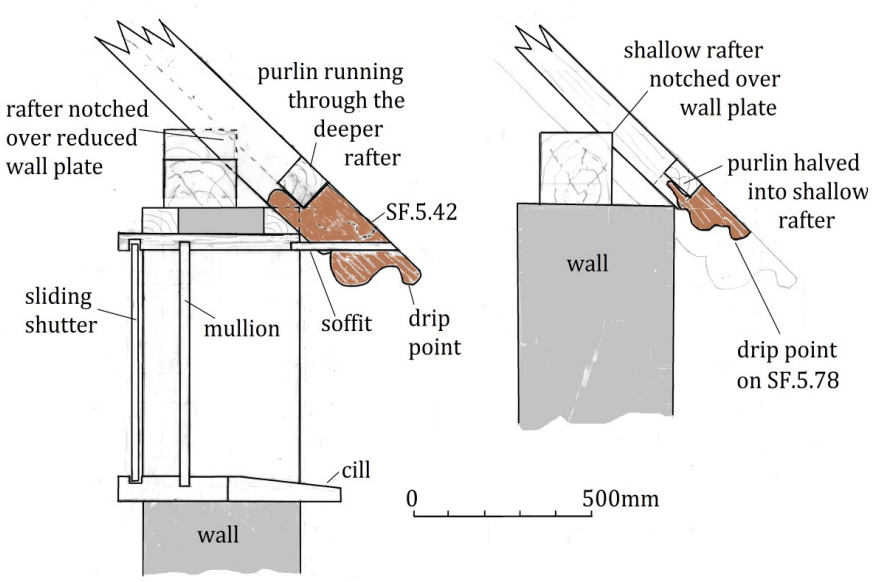

Fig. 5. Conjectural sketch of the 2 ogee moulded timbers as rafter ends

or just a little over. This roof pitch would be suited to many forms of roof covering including tegulae and imbrex tiles, stone slates, timber shingles or weather boards or various forms of thatch. However, measuring the exact angle is difficult due to the ancient weathering of the timber but just over 40 degrees seems to be the 'best fit' approximation. This pitch might be a little on the steep side for tegulae or stone slab roof coverings and perhaps a less durable organic covering is slightly more likely. Over hanging thatch would have obscured the decorative beam ends to some degree which might tend to support the use of a thinner, more rigid covering such as, weatherboarding, shingles or tile? The form of the moulding provides a sharp 'drip point' for any rain getting on to the rafter end towards what was probably the outside end.

Clearly this interpretation is very speculative but such elaborate and laborious working of a structural beam end has to be explored and compared with other evidence for the use of decorative moulding, of carpentry scale timbers in Roman Britain. Currently the only really close parallels known to this writer are the smaller beam end, timber SF 5.78 from the same post hole and a smaller, slightly more crudely worked, ogival beam end from a Roman well fill at Marston Park Bedfordshire (Goodburn, In Prep) (Figs. 2 & 6).

Although somewhat weathered and eroded it could be seen in 2019, that this beam end was cut to a 'boxed-half' section, probably by manual sawing from a rectangular section hewn (axe-shaped) baulk. This suggests that it had been made as part of a pair of similar beams, which might also support an origin in a principal roof truss of some kind. The cross halving joint may have housed some form of longitudinal roof beam or one of several purlin-type timbers set close to the eaves.

Even the more durable heart-face bore evidence of woodworm holes. For these to have developed in oak heartwood, the timber must have been exposed to some damp and in use for some time before reuse where it was totally waterlogged at the base of PH9. This may imply that it was part of a building which had lost part of its roof and/or been neglected. It also implies that its first use was somewhat earlier than the building of the F4 building. Incut marks from a large chisel, or possibly an adze, lay inside the diagonal housing joint. Other partial incut marks were also visible on the heart-face that may have been created by cutting another timber on it. The parent oak tree this beam was cut from was of medium growth rate with no more than 40 annual rings surviving, rendering the timber unsuitable for tree ring dating where 50 annual rings are the minimum needed.

SF.5.78: a similar, rare reused post pad timber with an ogival decorative end and relict joint

Timber SF.5.78 was rather similar to timber SF.5.42, with essentially the same decorative ogival cut end, and partially surviving truncated halving joint at the other end. However, it

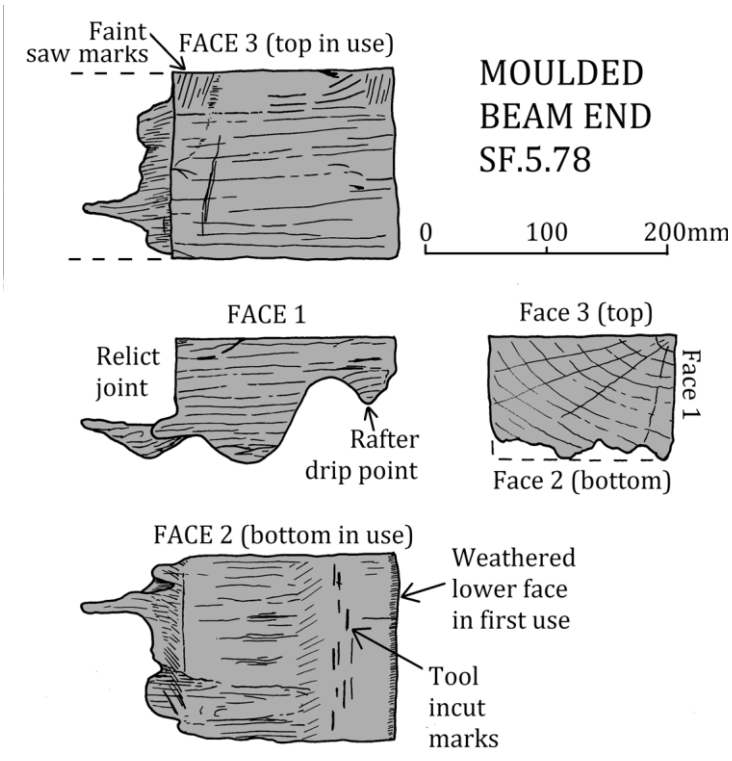

Fig. 6. Ogival moulded timber SF.5.78

was of smaller overall cross-sectional dimensions and its length was also more truncated, measuring 250mm long by 90mm wide by 150mm thick after conservation (Fig 6). It seems likely that this timber was once also a decorative lower end of a rafter from a fairly high status building, quite possibly a 'common rafter' from either a more lightly built roof area of the same building as yielded timber SF.5.42, or a smaller building within the same complex (Fig. 5).

The beam from which the timber was shaped was weathered and slightly decayed but on one face faint manual saw marks could still be seen in 2019, post-conservation. The timber was box quartered, probably by sawing an axe-squared baulk in half and then each half being divided by re-sawing to make four small beams in total. This method of timber conversion by sawing and re-sawing, common in post-medieval times, is very rare in the large London corpus of Roman structural timber, though was used to make the Marston Park example of a parallel find. It has also recently been found in the area NW of Cambridge on two recent archaeological projects. That area seems to have been very 'timber hungry' in the mid Roman period compared with the Greater London region (Goodburn 2019b & c). Very knotty, open-grown oak, often of modest size, was widely used there and much of it might have been of open farmland origin from hedgerows, riverside land and pasture. There may be some parallels here for the general nature of the oaks available in the area of the Bridge Farm site, though more evidence would be needed for clarity *(see below re off cut SF.5.79).* The parent oak used for this beam was medium sized, of moderate growth rate and again only had c.40 annual rings. Although this decorative beam end did not have the diagonal housing joint of timber SF 5.42 it is still likely to have been from the same building roof (Fig. 5).

SF.5.79: an off cut from the end of a rectangular hewn baulk that sheds light on local woodmanship, treescapes and timber supply

Another informative timber found in the stack of post pad timbers in PH 9 was timber SF.5.79, the obliquely sawn-off end of a hewn oak baulk (Fig. 7). This oak baulk end survived 380mm long by 250mm wide and 225mm thick.

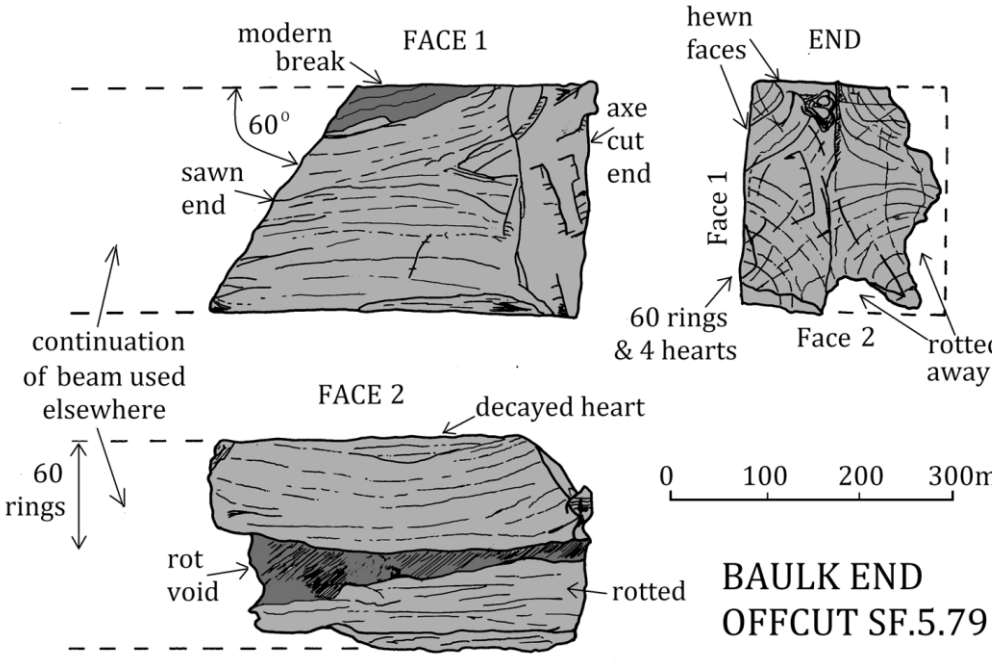

Fig. 7. Baulk end offcut SF.5.79 found in Posthole 9

The obliquely cut end was cut with a cross-cut saw or serrata, whilst the other end was rapidly axe cut as at the felling site. The axe cut end bore clear marks of a 75mm wide axe blade (Fig. 8) used to cross-cut or 'buck', the felled tree at the highest possible point in the crown where four major branches met (i.e. a little above what we would consider the 'timber point' today in good quality oak in SE England). The axe marks fit a common axe blade size for the Roman period recorded on many timbers excavated in Greater London and elsewhere.

The evidence of four hearts (i.e. large knots) at one end means the woodworkers at the felling site were struggling to cut the longest timber possible out of the parent oak (Fig. 9), probably implying that it was a fairly open grown tree and that long timber was generally not very available locally. Similar apparent multiple hearts are quite often seen in later medieval timbers in the SE of England but are rare in the large Roman London corpus. Although this timber had 60 annual rings the grain was so distorted that a tree ring sample would be impossible to measure, so slice sampling was not suggested.

Interestingly, the sawn end was cut to an angle of c.60 degrees which, possibly coincidentally, would be roughly the angle at which principal rafters might join in a simple roof truss of c.35 to 40 degrees slope (*see above re timber SF.5.42*). We may be getting indirect information on Roman roof construction here, in addition to information about local treescapes and woodmanship.

Fig. 8. Axe cut end of SF.5.79 showing axe marks and 75mm axe head

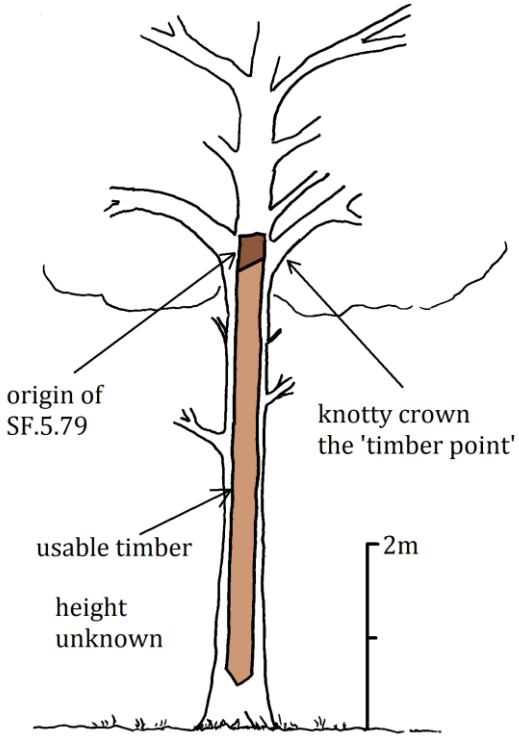

Fig. 9. Conjectural sketch of beam SF.5.79 located in an open-ground parent oak tree

SF5.80 plus one other:

SF.5.80 included three decayed fragments of oak. Another item labelled to the same context (5215) was an eroded section of oak roughly 45mm square and 290mm long and roughly box quartered. This appears to have been another packing timber from this post hole.

Woodwork found in Post Hole 11, building F4, timber SF.5.40'

The woodwork found at the very base of this post pit was limited to amorphous fragments of oak which can tell us little except that the lowest timbers in the post pit were of oak, with a maximum dimension 200mm.

Woodwork from well feature F9, timber SF 5.36

The waterlogged basal fills of this well yielded up a very decayed amorphous piece of oak. The maximum length is now c.920mm by 200mm wide by 60mm thick. Curiously when the timber was examined one section was fast grown oak and the other very slow grown! This might indicate that it was in fact two separate pieces before being sculpted by decay?

The significance of the small but rare Roman woodwork assemblage from Bridge Farm

This small assemblage of Roman period woodwork from Bridge Farm in the Ouse Valley of East Sussex, is important as it is a rare example of the survival of Roman woodwork from Sussex. It also provides a snap shot of aspects of the local woodmanship practices, carpentry and treescapes to add to that derived from the charcoal and pollen studies.

Of wider, national importance are the decorative moulded timber beam ends, as material evidence of timber architectural features which have not survived elsewhere in Roman Britain, apart, perhaps for one small rough example from a Bedfordshire well. Various characteristics of the moulded timbers indicate a possible origin as rafter ends from a moderately high status building. Timber elements of the upper parts of Roman buildings very rarely survive, in contrast to elements of walls, floors and foundations found in situ or reused in London, Carlisle, Vindolanda and more rarely, at a few other locations.

Acknowledgements

Thanks are due to the CAP team for help with examining the conserved timbers from the excavations and to D Millum et al for supplying background information on the project.

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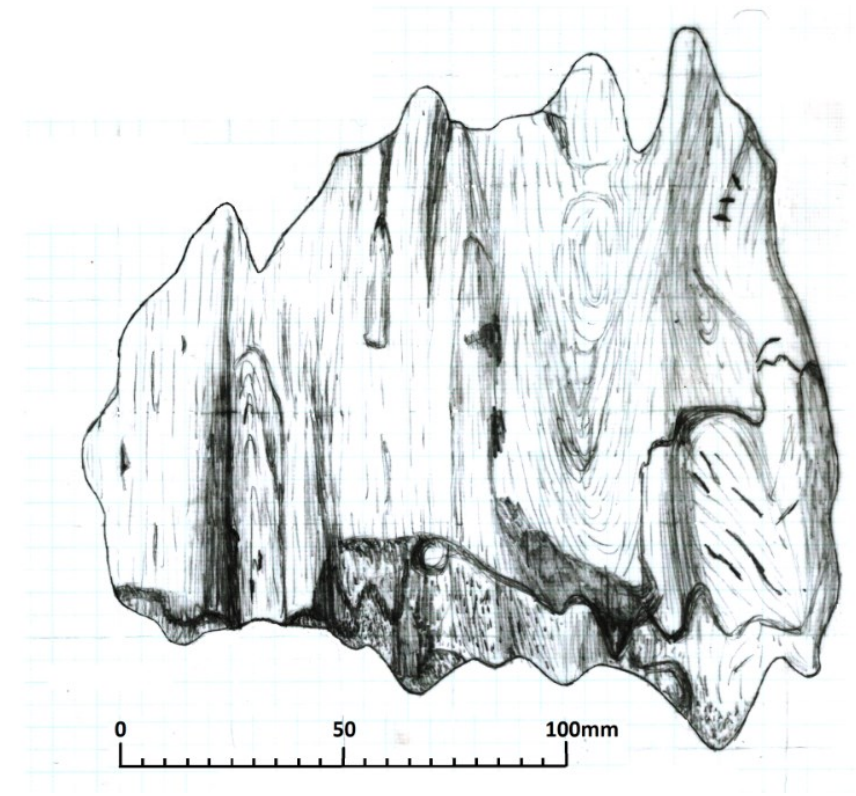
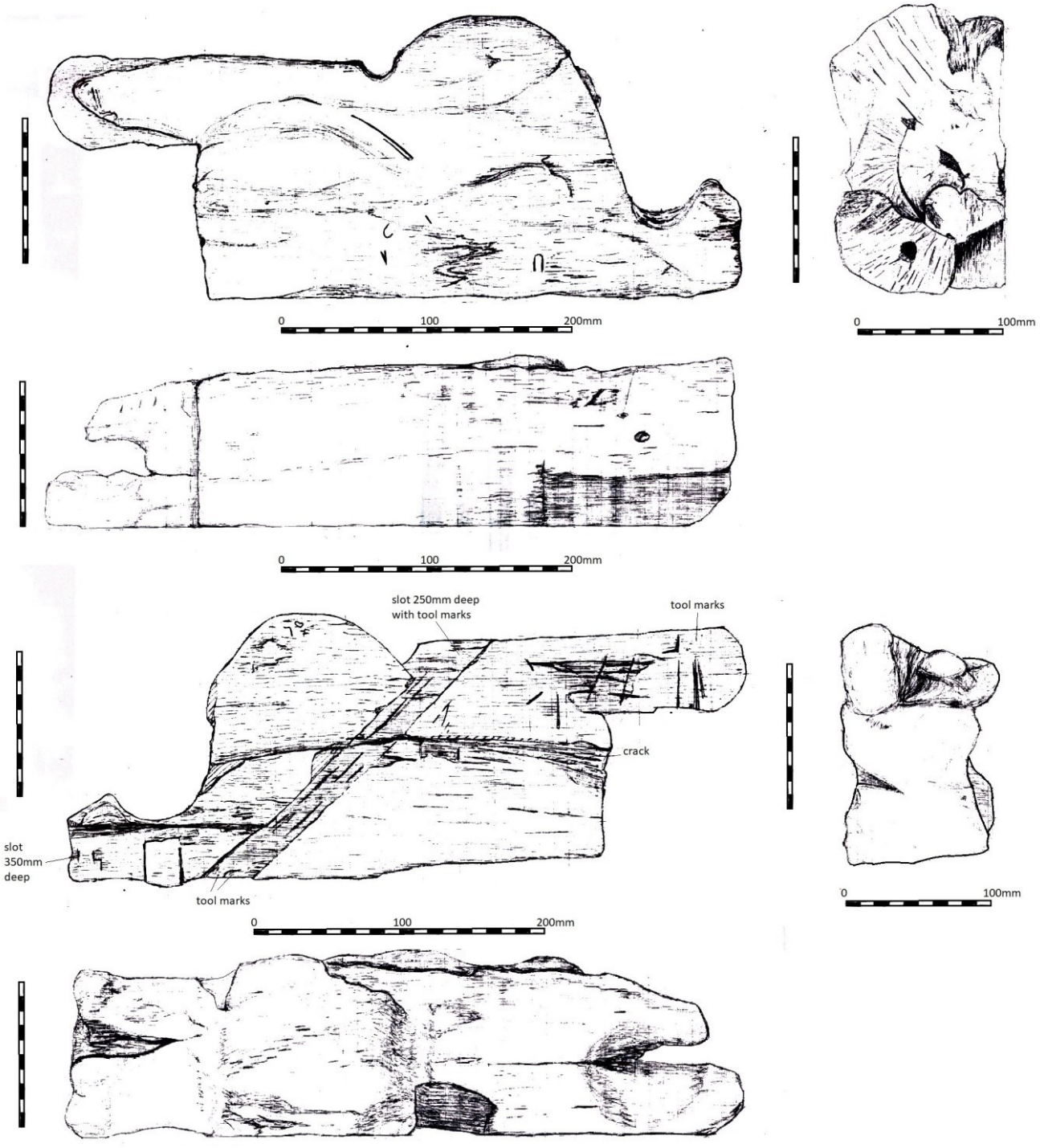
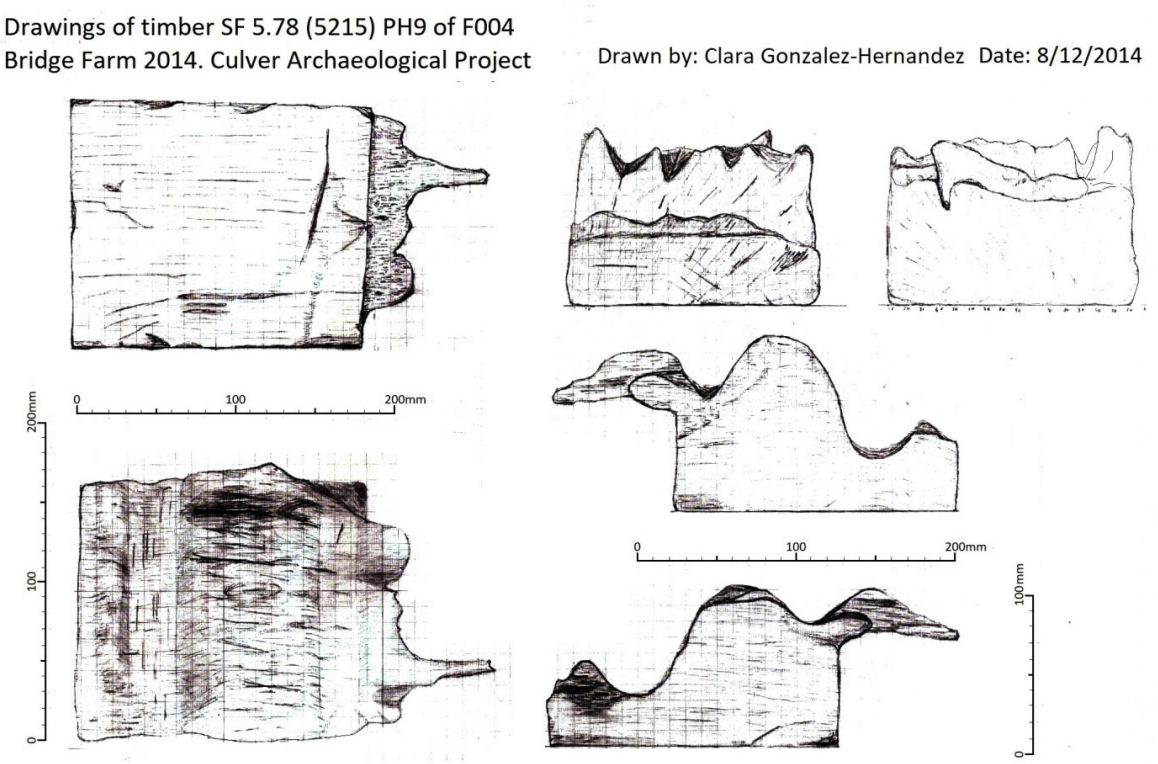
Appendix: Scale drawings of timbers from context (5215) in Posthole 9 of Feature F004, Bridge Farm 2014



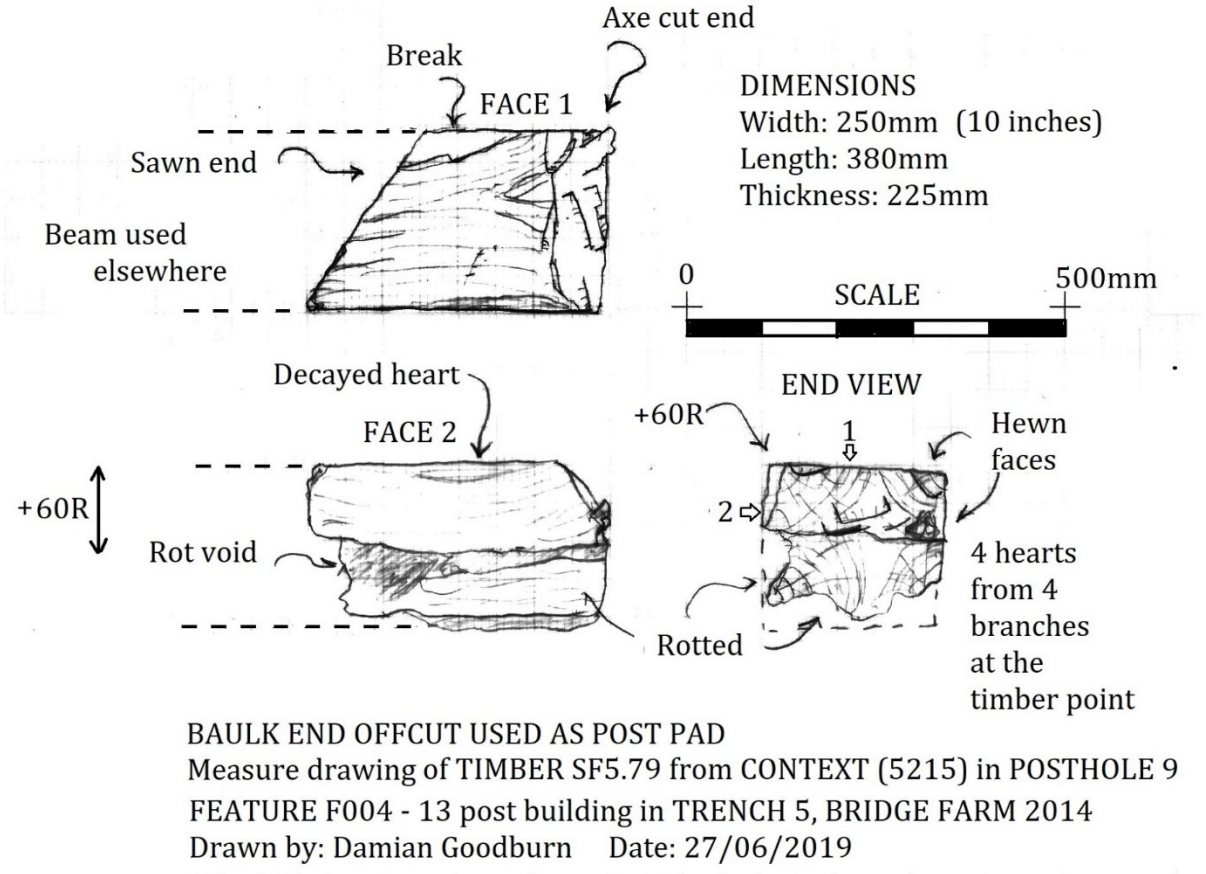
1.1: Scale drawing of the remnant post No.9 SF 5.41 by Clara Gonzalez-Hernandez



1.2: Scale drawing of 'ogee' timber SF 5.42 by Clara Gonzalez-Hernandez



1.3: Scale drawing of smaller 'ogee' timber SF 5.78 by Clara Gonzalez-Hernandez



1.4: Scale drawing of the baulk end offcut SF 5.79 by Damian Goodburn

16.4 Conservation Reports on wood, leather & jet by Durham University

Durham University

Artefact Conservation Services
Department of Archaeology Durham University
South Road Durham DH1 3LE tel 0191 334 1139 fax 0191 334 1101

Object : Waterlogged Timber | **Material : Wood** | **Date : 3/2/15**
Conservator : Matthew Walker | **Accession no :N/A** | **Lab no : 1372**
Site name : Bridge Farm 2014 | **Site code : BRF14** | **Context : 5212 / / Feature 009**
Small finds no : 5.36 | **Object source : CAP** | **XR no : N/A**
Photo no : Before: 1372A After: N/A

Description :
 Large piece of waterlogged timber showing some signs of having been originally 'prepared but since decayed/burnt?
 Orange spots of iron corrosion and small white mould spots present
 Dimensions: 920 x200 x60mm

Conservation Treatment :
 A face mask, lab coat and gloves were worn to protect against dirt and mould.
 The wood was wet cleaned using a brush under running tap water over a net frame.
 It was placed in a mesh bag with a tyvek label, placed in solution of water and 10% Polyetheylene Glycol (PEG) 400 and left immersed for two weeks.
 The solution was increased with 10% PEG 4000 and left for a further two weeks. This was repeated weekly for three weeks until the solution had reached a concentration of 40% PEG 4000.
 It was then frozen in a chest freezer for a week
 Next it went into the freeze dryer for a week under 200 millitorr of pressure to remove all the water in the wood while avoiding the capillary tension caused by the evaporative process through sublimation.

N.B. At this stage the freeze dryer failed and the conservation process was stalled. The wood was returned to the freezer.

Storage recommendations :
 Keep between 45-60% RH. Below 65% RH helps prevent mould growth and/or insect infestation.
 Keep out of direct sunlight, below 200 lux.
 Store in a perforated polyethylene bag with polyethylene foam backing to provide support.

Illustrations :

Before Conservation:

After Conservation:

Object : Waterlogged wood **Material : Wood** **Date : 03/02/2015**

Conservator : Bibi Beekman **Accession no : N/A** **Lab no : 1373**
Site name : Bridge Farm 2014 **Site code : BRF14** **Context : 5212 F009**
Small finds no : 5.36 **Trench : 5** **XR no : N/A**

Description :

Measurements :
155mm x 90mm x 40mm (largest piece)
80mm x 55mm x 20mm (second largest piece)
65mm x 30mm x 15mm (second smallest piece)
30mm x 15mm x 8mm (smallest piece)

Four small pieces of waterlogged wood from Bridge Farm. They belong together with 2 bigger pieces which are conserved by Matt Walker and Aja Cooper and are not included in this record. The wood shows signs of having been originally 'prepared' but since decayed/burnt. It might have been part of a structure associated with the well.

Before treatment, the wood is very soft and flexible and a fair amount of dirt is present.

Conservation Treatment :

- The wood is gently rinsed under the tap while it is placed on a wooden frame with a net. Soft brushes are used to remove the surface dirt, which consists of sand and some small pebbles.
- The pieces are put together in a net bag with an information label and the bag is closed.
- The wood is placed in a liquid PEG400 solution for two weeks.
- After these two weeks, on 17/02/2015, 10% of PEG4000 was added to the solution.
- After another two weeks, on 03/03/2015, again 10% of PEG4000 was added.
- After one week, on 10/03/2015, again 10% of PEG4000 was added.
- After two weeks, on 24/03/2015, the wood was placed in the freezer.
- After one week, on 31/03/2015, the wood was placed to the freeze dryer. However, this broke after one week and the wood was returned to the domestic freezer.

Storage recommendations :

• Stable PEG-treated wood can be stored without being boxed, however polyethylene sheeting against dust accumulation can be recommended.
• Wooden objects should be stored at an RH between 40-60%, to prevent mould growth at a high RH and to prevent the PEG acting as a humectant in low RH. Fluctuations in RH should be avoided.

Illustrations :

Before **After**

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Object : Timber Fragment **Material : Waterlogged Wood** **Date : 03/02/15**
Conservator : Aja Cooper **Accession no :** **Lab no : 1374**
Site name : Bridge Farm **Site code : BRF 14** **Context : 5212 F009**
Small finds no : 5.36 **Object source : CAP** **XR no : N.A.**
Photo no : CAP 324-325; 1374 Series

Description : BRF 14 – – Context 5212 – Feature 009 – S.F. 536 – Durham University Lab No. 1374
Large piece of waterlogged timber showing signs of having been originally 'prepared' but has since been burnt and decayed. Weight and measurements were not taken to prevent further degradation of the wood from air and light.
Dimensions : 520mm H x 110mm W x 110mm D
Conservation Treatment :
The water logged wood was placed on a mesh rack over a sink with no additional support. A small, steady stream of water from the faucet was left running over top of structurally sound parts of the object. Coarse brushes were used to brush areas of the wood that were firm to the touch. Finer brushes were used over more fragile areas that were degraded and smaller crevices. For the most part on this object, a coarse brush was fine to use.
Duration : 1.5 hrs
The water logged timber was too large for a net bag, so photographs will be used as documentation to confirm the timber for consolidation purposes. The timber was placed in a blue tank in the Conservation Wet Laboratory containing an initial 20:1 ratio of water and 10% PEG. Here it will remain undisturbed until the end of the consolidation. The ratio of PEG in the solution will be increased 10% every two weeks until the solution reaches 40% PEG.
Add 10% PEG and leave for 2 weeks =➔ add 10% PEG 4000 and leave for 2 weeks => add 10% PEG 4000 and leave for 2 weeks ➔ add 10% PEG 4000 and leave for 1 week.
[9.5 g in total each addition. 6kg PEG into the big bin; 3.5 kg PEG into the smaller bin.]
** The freeze dryer ceased to function properly while in the process of consolidating as of March – April, 2015. The consolidant was crystallizing on the surface of the wood . The process was reversed from freeze drying to remain object stability before continuing on a later date.**
□ On August 12, 2015, the wood was thawed out and ready to package after freeze drying.
□ A hairdryer was used to heat the crystallized PEG on the surface. Tissue was used to blot the excess PEG off the surface, and a brush used to push remaining PEG into surface.

Storage recommendations :
□ 1374 was repackaged into original container for transport back to client – plastic container with label; wood wrapped in acid free tissue paper; bubble wrap and / or foam peanuts to cushion.
□ Maintain RH levels of 40-60% as to prevent microbial growth.
□ To prevent from placing the wood in a dry environment as it may dry out, avoid extreme environmental fluctuations in temperature.
□ Keep away from V.O.C's.

Illustrations :

BEFORE :

AFTER

Object : post remains **Material : Waterlogged Wood** **Date : 03/02/15**
Conservator : Aja Cooper **Accession no : N.A.** **Lab no : 1392**
Site name : Bridge Farm **Site code : BRF 14** **Context : 5217 PH11**
Small finds no : 5.40 **Object source : CAP** **XR no : N.A.**
Photo no : CAP Incomplete; 1392 Series

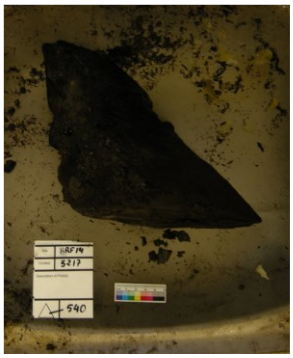
Description : BRF 14 – – Feature 004 – Context 5217 – SF 540 – Durham University Lab No. 1392
Medium sized piece of waterlogged timber showing signs of having been originally 'prepared' but has since been burnt and decayed.
Description on Temporary Storage Container:
Remains of post base in bottom of pipe of PH11. Part of this base removed and stored in water and dark. Measurements taken of remaining portion in situ.
Dimensions : 170mm H x 220mm W x 150mm D

Conservation Treatment :
The water logged wood was placed on a mesh rack over a sink with no additional support. A small, steady stream of water from the faucet was left running over top of structurally sound parts of the object. Coarse brushes were used to brush areas of the wood that were firm to the touch. Finer brushes were used over more fragile areas that were degraded and smaller crevices. For the most part on this object, a coarse brush was fine to use.

Duration : 20 min.
The water logged timber was too large for a net bag, so photographs will be used as documentation to confirm the timber for consolidation purposes. The timber was placed in a blue tank in the Conservation Wet Laboratory containing an initial 20:1 ratio of water and 10% PEG. Here it will remain undisturbed in the dark and saturated with water until the end of the consolidation. The ratio of PEG in the solution will be increased 10% every two weeks until the solution reaches 40% PEG.
 Add 10% PEG 400 and leave for 2 weeks = add 10% PEG 4000 and leave for 2 weeks => add 10% PEG 4000 and leave for 2 weeks add 10% PEG 4000 and leave for 1 week.
[9.5 kg PEG in total = 6.5 kg PEG into big bin; 3.5 kg PEG into smaller bin each time PEG is added to archaeological wood.]
** The freeze dryer ceased to function properly while in the process of consolidating as of March-April, 2015. The consolidant was crystallizing on the surface of the wood . The process was reversed from freeze drying to remain object stability before continuing on a later date.**
 On August 12, 2015, the wood was thawed out and ready to package.
A hairdryer was used to heat the crystallized PEG on the surface. Tissue was used to blot the excess PEG off the surface, and a brush used to push remaining PEG into surface.

Storage recommendations :
 1392 was repackaged into its original container for transport back to client.
 Maintain RH levels of 40-60% to prevent microbial growth.
 Avoid extreme fluctuations in temperature.
 Prevent from placing the wood in a dry environment as it may dry out.
 Keep away from V.O.C's

Illustrations : Before After

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Waterlogged post remains | **Material : Wood** | **Date : 03/02/2015**
Conservator : Charlotte Tomlin | **Accession no :** | **Lab no : 1397**
Site name : Bridge Farm 2014 | **Site code : BRF14** | **Context : 5217 PH11**
Small finds no : 5.40 | **Object source :** | **XR no :**

Description :

Before conservation: wood was saturated and covered in large deposits of mud and silt.

After conservation: the wood is dry and a light to dark brown colour. Some deposits of grit and silt remain on difficult to reach areas. Measures 310mm x 300mm x 160mm.

Conservation Treatment :

The wood was placed on a net tray underneath a light stream of water and cleaned using a soft brush to remove the various dirt deposits. For health reasons gloves and a mask must be worn whilst cleaning. The clean wood was then placed in a 10% solution of PEG 400. 10% PEG 4000 was added to the solution after two weeks, another 10% PEG 4000 was added after another two weeks, the final 10% PEG 4000 was added after one week. The wood was then left in the solution of 40% PEG 4000 for two weeks when it was transferred to the freezer for a week. The wood then spent one week in the freeze dryer. Excess PEG was removed from the surface by melting with a hairdryer and absorbing with tissue paper.

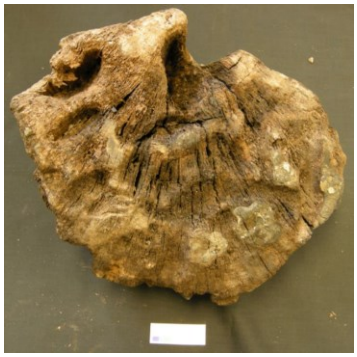
Storage recommendations :

Store in a box padded with acid-free tissue and bubble wrap at 40-60%RH.

Illustrations :

Before:


After:

Object : Post remains **Material : Waterlogged Wood** **Date : 03/02/15**
Conservator : Aja Cooper **Accession no :** **Lab no : 1384**
Site name : Bridge Farm **Site code : BRF 14** **Context : 5215 PH9**
Small finds no : 5.41 **Object source : CAP** **XR no : N.A.**
Photo no : CAP 0188-0189; 1384 Series

Description : BRF 14 – Lower fill in pipe of PH9 – Durham University Lab No. 1384

Large piece of waterlogged timber showing signs of having been originally 'prepared' but has since been burnt and decayed. Measurements and weight of piece were not taken to prevent further degradation from exposed air and light.

Description on Temporary Storage Container: 'Remains of post base in bottom of pipe in PH9.'

Dimensions : 190mm H x 170mm W x 90mm D

Conservation Treatment :

The water logged wood was placed on a mesh rack over a sink with no additional support. A small, steady stream of water from the faucet was left running over top of structurally sound parts of the object. Coarse brushes were used to brush areas of the wood that were firm to the touch. Finer brushes were used over more fragile areas that were degraded and smaller crevices. For the most part on this object, a coarse brush was fine to use.

Duration : 0.5 hrs

The water logged timber was too large for a net bag, so photographs will be used as documentation to confirm the timber for consolidation purposes. The timber was placed in a blue tank in the Conservation Wet Laboratory containing an initial 20:1 ratio of water and 10% PEG. Here it will remain undisturbed until the end of the consolidation. The ratio of PEG in the solution will be increased 10% every two weeks until the solution reaches 40% PEG.

Add 10% PEG and leave for 2 weeks =➔ add 10% PEG 4000 and leave for 2 weeks => add 10% PEG 4000 and leave for 2 weeks ➔ add 10% PEG 4000 and leave for 1 week.

[9.5 kg PEG total = 6 kg PEG into big bin; 3.5 kg PEG into small bin each new addition]

** The freeze dryer ceased to function properly while in the process of consolidating as of March-April, 2015. The consolidant was crystallizing on the surface of the wood . The process was reversed from freeze drying to remain object stability before continuing on a later date.**

 On August 12, 2015, the wood was thawed out and ready to package.

 A hairdryer was used to heat the crystallized PEG on the surface. Tissue was used to blot the excess PEG off the surface, and a brush used to push remaining PEG into surface.

Storage recommendations :

 1384 repackaged into original container for transport back to client – wood wrapped in acid free tissue paper with foam peanuts and / or bubble wrap to cushion.

 Maintain RH levels at 40-60% so as to not encourage microbial growth.

 To prevent from placing the wood in a dry environment as it may dry out, avoid extreme environmental temperature fluctuations.

 Keep away from V.O.C's

Illustrations :

BEFORE : **AFTER:**

Object : Waterlogged post	**Material : Wood**	**Date : 03/02/2015**
Conservator : Karla Dayhoff	**Accession no :**	**Lab no : 1387**
Site name : Bridge Farm	**Site code : BRF14**	**Context : 5215 PH9**
Small finds no : 5.41	**Object source : CAP**	**XR no :**

Description : 180mmx108mmx85mm; 180mmx68mmx43; 111mmx36mmx26mm
3 Pieces of wood, one smaller than other two, irregularly shaped, dark brown with light brown areas
Conservation Treatment :
Cleaned gently under t running lukewarm tap water to remove dirt. Bagged in net bag to keep pieces together. Soaked in 10% PEG 400 for 2 weeks. Add PEG 4000 until solution 40%, added 10% PEG 4000 on 17/02/2015, added 10% PEG 4000 on 03/03/2015. Place in freezer 24/03/2015, then the freeze dryer 31/03/2015. Pump broke during freeze drying process and wood had to be placed back in freezer.
Freeze drying completed successfully. Excess PEG reheated with hair dryer and adsorbed by wood
Storage recommendations :
Store between 40-60% RH, keep below 65% to prevent mould growth
Display under 200 lux
Illustrations :

Pre Cleaning

Post Cleaning

Post Freeze Drying

Object : Waterlogged wood	**Material : Wood**	**Date : 03/02/2015**
Conservator : Bibi Beekman	**Accession no : N/A**	**Lab no : 1385**
Site name : Bridge Farm 2014	**Site code : BRF14**	**Context : 5215 PH9**
Small finds no : 5.42	**Trench : 5**	**XR no : N/A**

Description :
Measurements :
470mm x 190mm x 105mm
Waterlogged wood from Bridge Farm, which is likely to be an original carved timber used as postpad in bottom of pipe of PH9. Removed as very rare find on Romano site and therefore requires further investigation. The piece is big and contains a linear carving.
Before treatment, the wood is very soft and flexible and a fair amount of dirt is present.

Conservation Treatment :
 The wood is gently rinsed under the tap while it is placed on a wooden frame with a net. Soft brushes are used to remove the surface dirt, which consists of sand and some small pebbles.
 The pieces are put together in a net bag with an information label and the bag is closed.
 The wood is placed in a liquid PEG400 solution for two weeks.
 After these two weeks, on 17/02/2015, 10% of PEG4000 was added to the solution.
 After another two weeks, on 03/03/2015, again 10% of PEG4000 was added.
 After one week, on 10/03/2015, again 10% of PEG4000 was added.
 After two weeks, on 24/03/2015, the wood was placed in the freezer.
 After one week, on 31/03/2015, the wood was placed to the freeze dryer. However, this broke after one week and the wood was returned to the domestic freezer.

Storage recommendations :
• Stable PEG-treated wood can be stored without being boxed, however polyethylene sheeting against dust accumulation can be recommended.
• Wooden objects should be stored at an RH between 40-60%, to prevent mould growth at a high RH and to prevent the PEG acting as a humectant in low RH. Fluctuations in RH should be avoided.

Illustrations :
Before


After



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Conservation record: Bridge Farm

Site code: BRF14	**Conservator: V. Garlick**	**Date: 10/03/2015**
SF no: 5.45	**Context: 5169**	**X-radiograph no: n/a**
Object: Bracelet fragment	**Material: Jet**	**Photography: Yes**

Description:
The object is a fragment of a jet bracelet, which measures approximately 30mm in length, between 3-6mm in width and 4mm in depth.

Condition:
- Overall in good general condition.
- Arrived in waterlogged condition.

Conservation treatment:
- The object was allowed to slowly air dry for one week inside a lightly pierced polythene bag.
- The object was consolidated using a 6% Paraloid B72 in acetone solution in order to stabilise.

Analysis:
n/a

Storage:
The object was stored in a polythene box with acid free tissue for support. The object should be stored at an ambient temperature and relative humidity avoiding the extremes.

Images:

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Object :	**Waterlogged wood**	**Material :**	**Wood**	**Date :**	**27/01/15**
Conservator :	**Rowan Gillis**	**Accession no :**		**Lab no :**	**1376**
Site name :	**Bridge Farm**	**Site code :**	**BRF14**	**Context :**	**5262 PH1**
Small finds no:	**5-56**	**Object source:**	**CAP**	**XR no :**	

Description

Large piece of dark red/brown hardwood. Rough serrations indicate it was broken off from a larger piece of wood.

Conservation Treatment

 Removed loose dirt with a brush under running water, over a wooden frame. Place object in net bags with waterproof label.
 Submerged in water with 10% PEG 400 solution for 2 weeks.
 Additional 10% PEG 4000 added and submerged for 2 weeks
 Additional 10% increments added over 2 week period, until total 40% mixture achieved
 On March 24 object was placed in freezer for 1 week
 Due to complications with the freeze dryer, freeze drying was not completed until 12/08/15
 Removed from freeze dryer. PEG crystals removed from surface of wood by applying heat with a hairdryer and dabbing with tissue

Storage recommendations

 Wrapped in acid free tissue and stored in a polyethylene box
 RH between 40-60%
 Integrated pest management recommended

Photographs

Before treatment

After treatment

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Object : Water logged wood | **Material : Wood** | **Date :03/02/2015**
Conservator : Caroline Berry | **Accession no :** | **Lab no : 1378**
Site name : Bridge Farm | **Site code : BRF 14** | **Context : 5261 PH1**
Small finds no : 5.56 | **Object source : CAP** | **XR no :**

Description :
4 fragments of waterlogged wood found from Bridge Farm.
A) 147mm - 158mm
B) 113mm - 36mm – 24mm
C) 90mm – 46mm – 25mm
D) 30mm - 10mm – 10mm

Conservation Treatment :
Initially the wood fragments were cleaned under a light flow of warm water with a fine net mesh placed under to capture the debris. Once the wood was cleaned of any surface dirt and residue from excavation, the wood was submerged in 10% PEG 400 for two weeks. After two weeks 10% PEG 4000 was added to the solution. This was repeated after two weeks until the Solution was up to 40% PEG. After 6 weeks of soaking in 40% PEG the wood was then placed in the Freeze Dryer for 1 week. Unfortunately the seal broke on the freeze dryer and so the wood has been placed back into the general freezer.

Storage recommendations :
Environment - RH: mid range RH, 40-60%. Avoid extremes & fluctuation.
Light: Typically <200 lux
Integrated Pest management (IPM) should be in place wherever wood is stored.
Storage: Small objects stored on trays, in draws or boxes either in cut outs in Plastazoate or nested in acid free tissue to ensure they do not move.

Illustrations :
Waterlogged wood after cleaning

After conservation

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Object : Waterlogged wood **Material :** Wood **Date :** 27/01/15
Conservator : Rowan Gillis **Accession no :** **Lab no :** 1376
Site name : Bridge Farm **Site code :** BRF14 **Context :** 5262 PH1
Small finds no: 5-65 **Object source:** CAP **XR no :**

Description

Long thin piece of dark red/brown hardwood, evidence of working. Dimensions: 155mm length, 55mm height.

Conservation Treatment

 Removed loose dirt with a brush under running water, over a wooden frame. Place object in net bags with waterproof label.
 Submerged in water with 10% PEG 400 solution for 2 weeks.
 Additional 10% PEG 4000 added and submerged for 2 weeks
 Additional 10% increments added over 2 week period, until total 40% mixture achieved
 On March 24 object was placed in freezer for 1 week
 Due to complications with the freeze dryer, freeze drying was not completed until 12/08/15
 Removed from freeze dryer. PEG crystals removed from surface of wood by applying heat with a hairdryer and dabbing with tissue

Storage recommendations

 Wrapped in acid free tissue and stored in a polyethylene box
 RH between 40-60%
 Integrated pest management recommended

Photographs

Before treatment:

After treatment:

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Object : Waterlogged Wood | **Material : Wood** | **Date : 03/02/2015**
Conservator : Charlotte Tomlin | **Accession no :** | **Lab no : 1383**
Site name : Bridge Farm 2014 | **Site code : BRF14** | **Context : 5262 PH1**
Small finds no : 5.65 | **Object source : CAP** | **XR no :**
Photo no :

Description :
Before conservation: large, waterlogged chunk of wood covered in a variety of dirt deposits including some orange patches and on the reverse of the wood, light clay like material with attached debris including small pebbles and stone grit.
After conservation: wood is dry and a light brown colour.

Conservation Treatment :
The wood was placed on a net tray underneath a light stream of water and cleaned using a soft brush to remove the various dirt deposits. For health reasons gloves and a mask must be worn whilst cleaning. The clean wood was then placed in a 10% solution of PEG 400. 10% PEG 4000 was added to the solution after two weeks, another 10% PEG 4000 was added after another two weeks, the final 10% PEG 4000 was added after one week. The wood was then left in the solution of 40% PEG 4000 for two weeks when it was transferred to the freezer for a week. The wood then spent one week in the freeze drier. Excess PEG on the surface of the wood was melted using a hairdryer and blotted off with tissue paper.

Storage recommendations :
Store in a box padded with acid-free tissue and bubble wrap at 40-60%RH.

Illustrations :
Before:

After:

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Object : shoe fragment	**Material : leather**	**Date : 10/02/15**
Conservator : Diana Choi	**Accession no :**	**Lab no : 1407**
Site name : Bridge Farm	**Site code : BRF14**	**Context : 5225**
Small finds no : 5.67	**Object source : CAP**	**XR no**

Description: heel portion of leather shoe; waterlogged. Remnants of shoe tie and nails present. Two nails have fallen out – bagged separately and placed in a desiccant. Shoe was very delicate and falling apart. After freeze drying, the shoe broke apart into 10 fragments, with 3 loose nails.

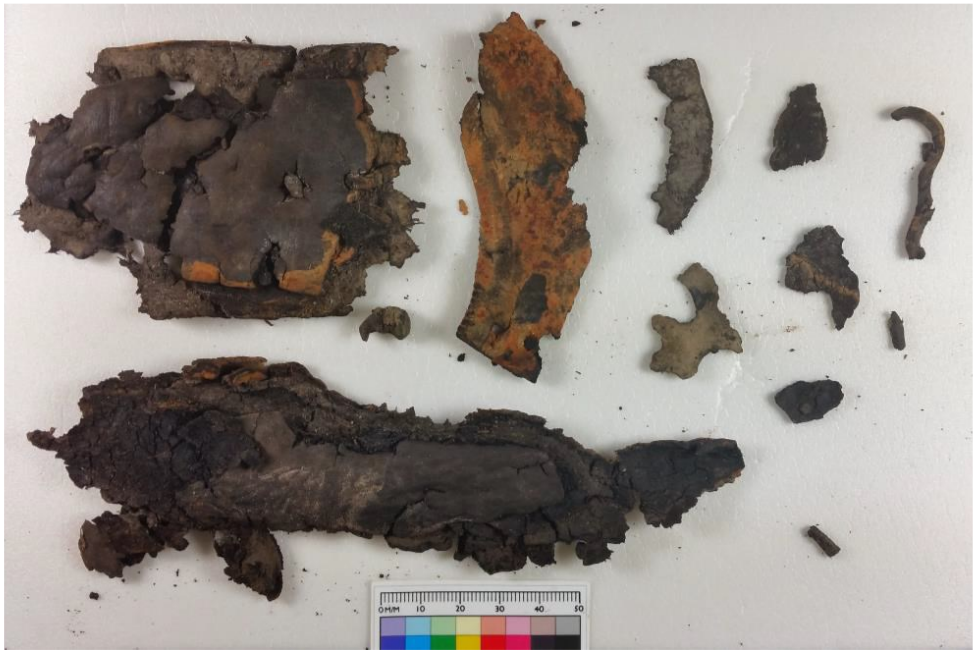
Conservation Treatment: Gentle cleaning took place over a net screen and a slow stream of water. Once thoroughly cleaned, object was placed in a net bag and immersed in a 10% glycerol solution in water. Once immersed in solution for two weeks, object was shaped and pressed flat between two sheets of cardboard. Flattened leather was placed in a freezer for one week. After one week, it was placed in the freeze drier for two days. Afterwards, leather was brought back to room temperature and stored in polythene bags with plastizoate cushion.

Storage recommendations: low lighting, mid-low RH.

Illustrations :

Before:

After:



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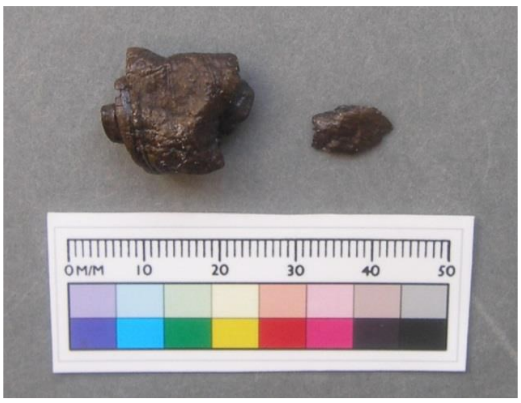
Conservation record: Bridge Farm

Site code: BRF14	**Conservator: V. Garlick**	**Date: 10/03/2015**
SF no: 5.68	**Context: 5198**	**X-radiograph no: n/a**
Object: Roll	**Material: Bark?**	**Photography: Yes**

Description:
The object is a roll of organic material, possibly bark, which measures approximately 18mm in length, 16mm in width and 6mm in depth.
Condition:
- Overall in good general condition.
- Arrived in waterlogged condition.

Conservation treatment:
- The object was allowed to slowly air dry for one week inside a lightly pierced polythene bag.
- The object was consolidated using a 6% Paraloid B72 in acetone solution in order to stabilise.

Analysis:
n/a
Storage:
The object was stored in a polythene box with acid free tissue for support. The object should be stored at an ambient temperature and relative humidity avoiding the extremes.
Images:



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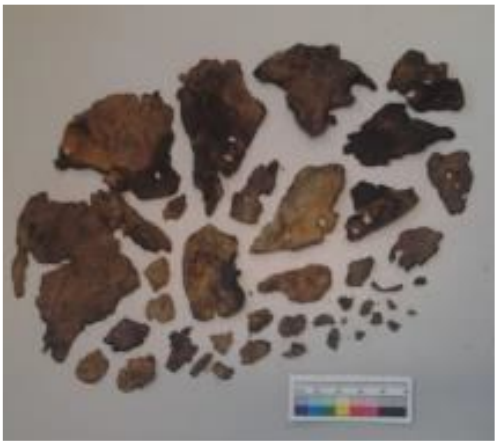
Object : Leather fragments | **Material : Leather** | **Date : 10/3/2015**
Conservator : Emily Zaadstra | **Accession no :** | **Lab no : 1417**
Site name : Bridge Farm | **Site code : BRF14** | **Context : 5226/5225 flots**
Small finds no : 5.69 & 5.76 | **Object source : CAP** | **XR no :**

Description :
(Bag 1) 29 fragments of leather, ranging in dimensional size from 3mm x 2mm x 1mm to 83mm x 74mm x 12mm. Largest piece looks to be part of the sole of a shoe.
(Bag 2) 47 fragments of leather, ranging in dimensions from 4mm x 2mm x 1mm to 80mm x 80mm x 6mm.
(Bag 3) 7 fragments of leather, ranging in dimensional size from 20mm x 7mm x 1mm

Conservation Treatment :
Loose surface dirt was removed using a paintbrush and tap-water over a sieve tray. Then transferred to netted bags and labelled then placed in a solution of 15% PEG 400 for a week. Finally placed between two pieces of cardboard to keep it flat and put in the freezer before finally being placed in freeze drier for 3 days.

Storage recommendations :
The objects should be kept in a perforated polythene bag with inert foam support, then stored at an RH below 40%.

Illustrations :



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Conservation record: Bridge Farm

Site code: BRF14	**Conservator: V. Garlick**	**Date: 10/03/2015**
SF no: 5.77	**Context: 5212 (flot)**	**X-radiograph no: n/a**
Object: Turned Disk	**Material: Jet**	**Photography: Yes**

Description:
The object is a jet turned disk, with indented decoration on the surface. The object measures approximately 35mm in diameter and 15mm in depth.
Condition:
- Overall in good general condition.
- Arrived in waterlogged condition.

Conservation treatment:
- The object was allowed to slowly air dry for one week inside a lightly pierced polythene bag. The object lightened and discoloured slightly through drying.
- The object was consolidated using a 6% Paraloid B72 in acetone solution in order to stabilise.

Analysis:
n/a
Storage:
The object was stored in a polythene box with acid free tissue for support. The object should be stored at an ambient temperature and relative humidity avoiding the extremes.
Images:

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Object : Unknown Material : Wood Date :
Conservator : Ruth Watson Accession no : Lab no : 1386
Site name : Bridge Farm Site code : BRF14 Context : 5215 PH9
Small finds no : 5.78 Source: CAP

Description :

A large roughly rectangular section of waterlogged wood with a s shape profile at one end and a thin protrusion at the other. The piece measures very roughly 350mm by 300mm by 250mm ish
The piece is in reasonable condition with some fibres flaking from the surface but otherwise good and
solid.

Conservation Treatment :

Piece washed in low running cold water to remove surface dirt then treated in a bath of 10% PEG 1000
initially. PEG 4000 was then added at 10% increments every 2 weeks until a concentration of 40% was
achieved. Piece was then freeze dried

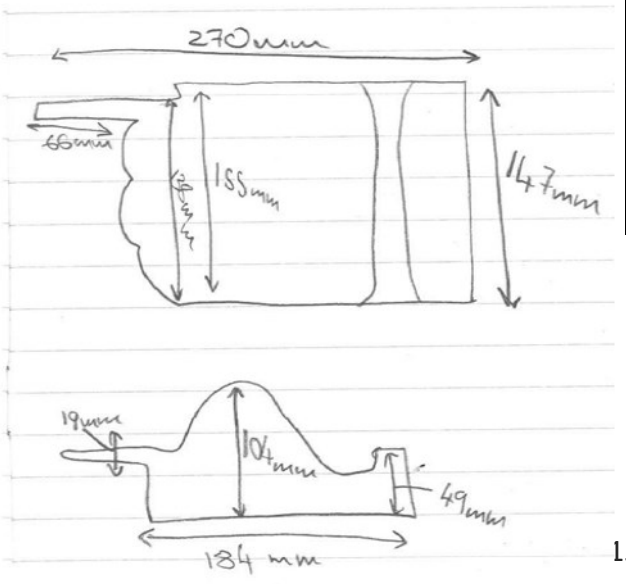
Storage recommendations :

Once the piece has been freeze dried it will remain relatively stable
However should ideally be stored below 60% RH to prevent any mould growth and away from sources of light
Stored in a labelled container with a plastazote foam support if required, to prevent knocking or damage

Illustrations :

Before:

After:



Artefact Conservation Services
Department of Archaeology □ Durham University
South Road □ Durham □ DH1 3LE □ tel 0191 334 1139 □ fax 0191 334 1101

Object : large prepared timber **Material : wood** **Date : 03/02/15**
Conservator : Diana Choi **Accession no :** **Lab no : 1388**
Site name : Bridge Farm **Site code : BRF14** **Context : 5215 PH9**
Small finds no : 5.79 **Object source : CAP** **XR no :**

Description: Large piece of prepare timber; section of a tree trunk. Heavily covered in dirt. Possibly part of building material.

Conservation Treatment: Gentle cleaning with a brush and a slow stream of water. Cleaning took place over a net. After thorough cleaning, wood was placed in a net bag and immersed in a 10% PEG400 solution with water. After two weeks, 6kg of PEG4000 was added into the solution. After PEG4000 reaches 40% of the entire solution, object underwent a freeze-drying process. After freeze-drying process was complete, object was removed and wrapped in acid-free tissue and bubble wrap.

Storage recommendations: moderate Rh between 40 – 60%. Keep consistent RH and sufficient padding.

Illustrations :

Before:

After:

Artefact Conservation Services
Department of Archaeology □ Durham University
South Road □ Durham □ DH1 3LE □ tel 0191 334 1139 □ fax 0191 334 1101

Object : Waterlogged Wood **Material : Wood** **Date : 03/02/2015**
Conservator : Karla Dayhoff **Accession no :** **Lab no : 1379**
Site name : Bridge Farm **Site code : BRF14** **Context : 5215 PH9**
Small finds no : 5.80 **Object source : CAP** **XR no :**

Description : 136mmx50mmx35mm; 103mmx54mmx30mm; 95mx41mmx37mm
3 Pieces of waterlogged wood; rectangular in shape

Conservation Treatment :
Cleaned gently under t running lukewarm tap water to remove dirt. Bagged in net bag to keep pieces together. Soaked in 10% PEG 400 for 2 weeks. Add PEG 4000 until solution 40%, added 10% PEG 4000 on 17/02/2015, added 10% PEG 4000 on 03/03/2015. Place in freezer 24/03/2015, then the freeze dryer 31/03/2015. Pump broke during freeze drying process and wood had to be placed back in freezer.
Wood freeze dried successfully and removed from freeze drier. Wood is now much lighter in weight and colour

Storage recommendations :
Store between 40-60 RH; if on display keep below 200 lux

Illustrations :

Pre Conservation

Post freeze drying

16.11.1 The Palaeo-environmental (charred plant, charcoal and wood) assessment by Michael J. Allen, PhD, MCIfA, FLS, FSA with a contribution by Lisa Gray

version AEA 218.03.01: revised by 8 May 2018

AEA: Allen Environmental Archaeology

Redroof, Green Road, Codford St. Peter, WARMINSTER, Wiltshire, BA12 0NW (Tel: 07828 103454)

Following assessment of 44 bulk samples of both charred and waterlogged remains from BRF 13 in 2013 (Allen 2013/2017) a second set of 44 processed sample flots and 21 hand recovered charcoal pieces was assessed from BRF 14.

The samples for assessment comprised flots from bulk mass floatation on site using a Siraf-type flotation tank with flots retained on 300µm mesh and residues on 1mm mesh, and some of the ecofacts (charcoal, seeds/cereal grains and wood) sorted from a variety of undefined course fractions. The samples included both typical archaeological contexts, and waterlogged contexts which had not been differentiated. Consequently large bulk samples of waterlogged remains were processed and the flots and residues dried and retained as charred remains. Some of the flots and sorted wood was damp/moist others were fully dried. Some loss and damage to waterlogged remains may have resulted and the loss of invaluable waterlogged palaeo-environmental evidence may be inevitable.

Samples

The samples comprised:

- A mass of bags of flots of varying types and sizes
- 2 bags of 'residual finds organic material'
- 1 small box of charcoal samples
- 1 bag of charcoal samples (+some loose bags of charcoal samples)
- 1 box of delicate items, residual organic finds (with 2 bags)

All of the 95 component sample elements were listed in a single inventory (Appendix 1). The residual organic finds included charcoal, wood, seeds (=charred cereal caryopses), nut shells etc., sorted by the volunteers from the coarse (unspecified) residues. The charcoal samples were large hand-recovered pieces, and the delicate items were labelled as leather. The 95 items included: 44 flots (45 items), 24 items sorted from residues, 21 charcoal samples (24 items) and 2 samples of leather.

No residues were supplied, but many of the residues had been sorted by volunteers: it is evident that this was of a highly variable quality and because of the nature of the deposits at Bridge Farm all of the charred grain caryopses did not float and were recovered from residues. The quantity of grain is, therefore, probably a significant *under representation* of grain (and legumes/peas etc. if they were present). Several other studies have shown that sorting by untrained volunteers without initial training, familiarisation with charred plant remains and reference material on hand, and high-levels of environmental supervision, can typically result in between <5% and 45% recovery (ie, loss of 65-95% of recognisable / identifiable and quantifiable larger plant remains).

This assessment is, therefore, of 44 bulk samples (charred and waterlogged) and 21 hand recovered charcoal samples (ie, 65 samples). The waterlogged plant remains are only cursorily appraised, and not assessed in detail. This information can be amalgamated, or considered with, the previous assessment

of 44 samples (BRF 13) dated 19th November 2013, and revised 19th February 2017 (Allen 2017) funded by AOC.

Aims and requirements

Each sample flot was assessed for charcoal and charred plant remains (Tables 2, 3 and 4), and waterlogged remains (Tables 1 and 5). The aims of assessment, as BRF 13 (Allen 2013/17), were to : -

- determine the presence, quantity, quality and diversity of palaeo-environmental remains to aid in the understanding and interpreting the features, the activity and economy of the site, and indicate the archaeological and palaeo-environmental significant of the assessed remains
- determine samples suitable for analysis of charred and waterlogged plant remains and charcoal analysis.
- make recommendations for suitable analyses as, and if, necessary

Full proposals for analysis are suggested.

Pre-assessment processing

The flots were supplied processed. Although supposedly dry, some were still damp or moist so required drying, others were congealed masses of soil and plant remains, some were waterlogged and few were very dusty. Where required flots were either dry sieved (>4mm, >2mm and <300µm) or refloated by laboratory washover- bucket flotation, with flots retained on 0.5mmor 300µm (depending if formerly waterlogged); where waterlogged they were fractionated into >4mm, >2mm, >1mm and >300µm and dried,

Three waterlogged sample flots were very large, and although dry, were refloated and fractionated (Table 1).

Feature	*Context*	*Sample*	*vol proc / taken (litres)*	*Flot vol (ml)*	Wood >16mm (pieces)	>4mm (ml)	>2mm (ml)	>1mm (ml)	>300µm (ml)
Well F009 4th fill	5085	7	70	1250	-	500	150	500	
Well F009 4th fill	5212	29	140	2000	*c.* 80	400	150	200	325
Well F009	5225	50	382	1500	6	1000	30	60	60

Table 1. Details of large dried waterlogged samples that were re-floated.

Several other dried but waterlogged samples, were re-washed to assist assessment including sample 36 from posthole 11 in building F004.

Assessment methods

All flots and any elements provided sorted from flots or residues samples provided for assessment were examined.

All dry flots (and some of the sorted charcoal) were sieved to separate the >4mm and >2mm charcoal and both the recovered charcoal and remaining flots were, were scanned under a ×7 - ×45 stereo-binocular microscope and the presence of charred plant and charcoal remains recorded in table 2. The volume of flot is the estimated charred remains / waterlogged remains vs the estimated volume of modern rooty material (this different from nomenclature given in the BRF 13 assessment (Allen 2013/17). The presence of charred plant remains and charcoal were recorded. None of the flots were sorted, except for obvious cereal; caryopses. Waterlogged samples inadvertently processed by standard methods and dried were reviewed in table 2; some of which had to be either refloated by laboratory wash-over flotation and fractionated (Table 1), or just dry fractionated to separate larger woody elements from the plant detritus and assist appraisal.

Assessment results

The Bridge Farm site is situated on a shallow meander core in a large meander of the River Ouse on typical brown earths, pelo-alluvial gley soils (Jarvis *et al.* 1984) and pelo-alluvial brown earths over river terrace deposits, and adjacent to deeply stratified alluvium (cf. Scaife & Burrin 1983). Seasonally high ground water tables gave rise to occasional locally waterlogged contexts in deeper features and those at lower altitudes nearer the current river course. No phasing was provided so for assessment so all were considered as one 'Roman' phase (phasing was added subsequently after analysis for archive and review purposes).

Samples

The processed volume of all samples is not known, nevertheless, samples varied from 8 litres to a massive 382 and 706 litres. The larger samples were processed principally taken for the recovery of large waterlogged wooden elements (Kane pers. comm.).

Charred plant and charcoal remains

Despite 44 samples representing at least 2226.5 litres of soil (no records of volume processed for 11 samples 25% were available) being processed and assessed charred plant remains were generally sparse and in low quantities. Charred cereal grain was only noted in 11 of the 44 samples. Surprisingly none were recorded in the samples pit (pit F010), nor ditch (F001), but not untypically grain was essentially absent from the majority (96%) of the postholes samples; only one sample of which produced any grain (Table 3). Cereals were predominantly wheat/barley, but some rye/oat may be present.

Feature type	*Hearth*	*Forge*	*Pit*	*Ditch*	*Well*	*Posthole*
No. features / no. samples	1 / 2	1 / 2	1 / 2	1 / 1	1 / 10	14 / 27
Grain present Approx. total	85	8	0	0	42	1
Grain per feature / per sample	85 / 23	8 / 4	-	-	1 / 4	0.07 / 0.03

Table 3. Presence and occurrence of cereal grain

There was also a distinct lack of charred food seeds (relatively common on Romano-British sites), and more specifically of cereal chaff remains (lemma, rachis fragments spikelet forks, lemma etc.) and weed seeds. No chaff was noted and charred weed seeds were present in three samples; the hearth F002, forge F007and pit F010. What this may indicate is that processing of cereal remains was not undertaken on this site, or even that this site does not represented typical domestic activity and food preparation and consumption. Cereal remains, however, did occur in the one in very large numbers (n=85 sample, hearth F002, sample 1), and overall this pattern concurs with the BRF 13 results were only 2 of 42 samples (<5%), but very high numbers (50+ and 400) were recorded (Allen 2013/17).

Bridge Farm (BRF 14)

Feature	*Context*	*Sample*	*vol proc / taken (litres)*	*Flot vol (ml) flot / roots*	*grain*	*legume/ pea / lentil*	*weed seeds /chaff*	*charcoal >4mm pieces*	*charcoal <2mm (ml)*	*Notes*	*analysis*
Roman Period 4-6 AD 70-410 (insufficient evidence and/or stratigraphy to define more accurately)											
p/h S/bdg F011	5187	33	20 / 20	25 / 5	-	-	- / -	-	-	-	
Roman Period 4 AD 70-150											
Ditch F001, main fill	5086	8	/	10 / 5	-	-	- / -	20	4	-	C
Roman Period 4-5 AD 70-250											
Hearth F002 top fill	5017	1	30 / 30	25 / 25	85	-	?C / -	23	3	Fine comminuted charcoal and rooty debris	P C
Hearth F002, lower fill	5064	6	26 / 26	80 / 20	-	-	- / -	-	-	-	
Roman Period 6 AD 250-410											
p/h1 in building F004	5261	53	16 / 16	15 w	-	-	- / -	13c	1	Fine detritus, >4mm burnt bone	C
p/h1 in building F004	5263	54	19 / 19	30 / 1	-	-	- / -	1c	+	Fine comminuted charcoal	
p/h1 in building F004	5264	'?' ?55w	9 / 9	80	-	-	- / -	94c	3	Fine charred and w/l dust	C
p/h2 in building F004	5118	10	/	3 / 350	-	-	- / -	6	1	Mostly rooty material	
p/h2 in building F004 pipe	5144	23	60 / 60	65 / 50	-	-	- / -	6	2.5	Many fine comminuted charcoal	
p/h3 in building F004	5120	11	/	1 300	-	-	- / -	3	+	Mostly rooty material	
p/h3 in building F004 pipe	5148	24	/	1 / 4	-	-	- / -	-	-	V rage fine comminuted charcoal	
p/h4 in building F004	5122	12	30 / 30	1 / 300	-	-	- / -	2	1	Mostly rooty material	
p/h4 in building F004 pipe	5245	42w	24	20	-	-	- / -	-	-	General w/l detritus	
p/h4 in building F004 pipe	5248	49	20 / 20	-	-	-	-	8w	-	Recorded as 'leather'	leather
p/h6 in building F004 pipe	5241	48w	25 / 25	30	-	-	- / -	10	-	Fine waterlogged detritus	
p/h7 in building F004 pipe	5213	31	9 / 9	1 / 4	1	-	-	7	0.1	½ rye/oat grain	
p/h8 in building F004	5130	16	/	1 / 250	-	-	- / -	2	4	Mostly rooty material	
p/h8 in building F004 pipe	5140	21	25 / 25	25 / 5	-	-	- / -	-	0.1	Rare v fine comminuted charcoal	
p/h8 in building F004 pipe	5201	32	19 / 19	20 / 5	-	-	- / -	-	-	Fine comminuted charcoal	W
p/h9 in building F004	5215	34w	15 / 15	60	-	-	- / -	13+	+	Fine waterlogged detritus	
p/h9 in building F004 pipe	5142	22	20 / 20	40 / 10	-	-	- / -	3	0.5	Rare v fine comminuted charcoal	
p/h9 in building F004 pipe	5152	30w	13 / 13	60w	-	-	- / -	7	>0.1	waterlogged	
p/h10 in building F004	5134	18	30 / 30	1 / 30	-	-	- / -	2	-	Mostly rooty material	
p/h10 in building F004 bot	5216	35w	20 / 20	150w	-	-	- / -	40w	+	Fine waterlogged detritus	W
p/h11 in building F004	5136	19	18 / 18	1 / 75	-	-	- / -	3	<1	Mostly rooty material	
p/h11 in building F004 bot	5217	36w	9 / 9	60w	-	-	- / -	32c+w	13	Fine waterlogged detritus	C W

Feature	*Context*	*Sample*	*vol proc / taken (litres)*	*Flot vol (ml) flot / roots*	*grain*	*legume/ pea / lentil*	*weed seeds /chaff*	*charcoal >4mm pieces*	*charcoal <2mm (ml)*	*Notes*	*analysis*
p/h12 in building F004 pipe	5247	45w	8 / 8	40w	-	-	- / -	2c	+	Fine waterlogged detritus – includes flakes modern green paint	
p/h13 in building F004	5223	37w	21 / 21	60w	-	-	- / -	-	+	Fine waterlogged detritus	? w
Roman Period 6B-C AD 300-410											
p/h 5035, hole	5034	3	/	10 / 50	-	-	- / -	-	-	-	
p/h 5035, pipe (residual)	5043	4	13 / 13	1 / 4	-	-	- / -	-	-	-	
Forge F007 top fill	5004	2	10 / 10	18 / 2	5	-	- / -	3	2	Fine comminuted charcoal and debris	P
Forge F007, 1ry fill	5053	5	/	20 / 150	3	-	C / -	13	5	Mostly rooty some fine charcoal	P C
Pit F010 3rd fill = <41>	5168	38w	18.5/18.5	35w	-	-	- / -	44c/6w	5c+w	Fine comminuted charcoal + >4mm burnt one	C W
Pit F010 3rd fill = <38>	5167	41w	/	50w	-	-	C / -	27c&w	1	Fine waterlogged detritus	
Well F009 top fill	5194	25	/	1 / 9	-	-	- / -	-	+	-	
Well F009 2nd fill =<28>	5195	26	/	40 / 10	-	-	- / -	20	-	-	
Well F009 2nd fill labelled F010	5159	28w	43 / 43	5 / 15	1	-	- / -	5	>0.1	waterlogged	W
Well F009 3rd fill	5197	27w	/	35w	-	-	- / -	1	-	Many ?waterlogged ?*Rubus* seeds and dust	W
Well F009 4th fill = <29+44>	5085	7w	70 / 70	1250	3	37 h/nut w	- / -	w	w	Bone frag	P W
Well F009 4th fill = <44+7>	5212	29w	140/140	2000	23	-	- / -	100w+c	150 c+w	Grain has wheat/barley and a few rye/oat; charcoal and wood mainly lw but some rw and bark Waterlogged dried plant debris	P C W
Well F009 4th fill = <7+29>	5198	44w	338	80w	16	8h/nut w		100s w 20c	1c	Fine waterlogged detritus	W
Well F009 =<39>	5225	50w	382	1000	4c	45h/nut w	- / -	100+c/ 100+w	++	Much waterlogged debris	P W
Well F009 btwn 4th+5th fills	5225	39w	20 / 20	No flot	1		1w	20ml w		Waterlogged large elements only	W
Well F009 5th fill	5226	40w**	706/706	30w	4c	55h/nut w	- / -	100+ w+c	15	Fine waterlogged detritus, possible bit of leather	P C W
Hand-picked charcoal											
Roman period 4											
Top layer of ditch F001	5001	-	-	-	-	-	-	5 lw	-		
Roman periods 4-6											
Surface of excav trench	5000	-	-	-	-	-	-	5 lw	-		

Feature	*Context*	*Sample*	*vol proc / taken (litres)*	*Flot vol (ml) flot / roots*	*grain*	*legume/ pea / lentil*	*weed seeds /chaff*	*charcoal >4mm pieces*	*charcoal <2mm (ml)*	*Notes*	*analysis*
Roman period 6C											
Top fill of pit F010	5102	-	-	-	-	-	-	1 lw	-		
Primary fill of pit F010	5200	-	-	-	-	-	-	1 lw	-		
Well F009 penultimate fill	5159	-	-	-	-	-	-	11 lw	-		
Upper fill of ditch F003	5206	-	-	-	-	-	-	12 lw	-		
Roman period 6											
Pit F010 fill above primary	5167	-	-	-	-	-	-	18 lw	-		
Large pit on W baulk	5111	-	-	-	-	-	-	1 lw	-		
Top layer of ditch F003	5009	-	-	-	-	-	-	20+	20+	Probably 1 piece	
Top layer of ditch F003	5018	-	-	-	-	-	-	-	+		
p/h13 in building F004	5003	-	-	-	-	-	-	2 lw	-		
p/h in F001 at N of excav	5065	-	-	-	-	-	-	3 lw	-		
p/h1 in building F004	5116	-	-	-	-	-	-	3 lw	-		
p/h2 in building F004	5118	-	-	-	-	-	-	1 lw			
p/h11 in building F004	5136	-	-	-	-	-	-	2 lw	-		
Contexts with residual (mixed) material											
Post hole within ditch F003	5037	-	-	-	-	-	-	-	2		
West p/h in 'J' in SW cnr	5059w	-	-	-	-	-	-	1 lw	-		
East p/h in 'J' in SW cnr	5061	-	-	-	-	-	-	1 lw	-		
Pipe of p/h 7 in bldg F004	5128	-	-	-	-	-	-	-	-	Fragment of pottery	
Pipe of p/h1, bldg F004	5262	-	-	-	-	-	-	1 lw	-		
Roman not closely datable											
Top fill of pit F010	5157	-	-	-	-	-	-	2 lw	-		

KEY: A*** = > 75; A**= >20; A=10-20; B= 5-9; C= 1-5. rw = ROUNDWOOD; lw = LARGE WOOD

ANALYSIS C = CHARCOAL/WOOD; P = CHARRED PLANT REMAINS; W = WATERLOGGED PLANT

Table 2. Assessment of the charred plant and charcoal remains from Bridge Farm (BRF 14) Note: phasing supplied by D. Millum (CAP) is that from CAP Periods, based on pottery assessment by M. Lyne

Charcoal

Charcoal was ubiquitous in dry and formerly waterlogged samples from most feature types. 31 of the 44 samples (70%) have charcoal >4mm, and 22 of the sample (50% have charcoal both >4mm and >2mm. These come from all features, but in varying quantities (Table 2), and is variable represented in features (Table 2).

Feature type	*Hearth*	*Forge*	*Pit*	*Ditch*	*Well*	*Posthole*
Samples with >4mm charcoal / no. samples	1 / 2	2 / 2	2 / 2	1 / 1	7 / 10	17 / 27
% of sample with >4mm charcoal	50%	100%	100%	100%	71%	63%
No. samples with over 10 pieces >4mm	1	1	2	1	5	6
% of samples >4mm charcoal with >10 pieces (over 4mm)	100%	50%	100%	100%	70%	36%

Table 4. Presence and occurrence of charcoal

Nearly all the charcoal examined from bulk samples was wood (heartwood) or large branchwood, in which no obviously curvature was present. No twig and obvious small Roundwood was noted. Most samples (71% n=31) contained charcoal >4mm, and 50% (n=22) recovered charcoal of both >4mm and >2mm. It was present in feature of all types in varying propositions (Table 4).

Both the hearth (F002) and forge (F007) contained moderate quantities of charcoal, as one might expect. Most was heartwood suggesting selected mature wood for high temperature burning. Interestingly, the lower fill (5053) of the forge was devoid in charcoal >2mm. Samples from pit F010 and ditch F001 contained moderate charcoal whilst that in the well was more sporadic. The latter, with few charred plant remains, may suggest dumping and disposal of fuel, hearth or furnace waste in the well.

Charcoal presence in the 27 posthole samples was more sporadic (Table 4); a few samples contained large quantities of charcoal making the origins of the charcoal (timber vs incidental) questionable without archaeological field observation of presence, distribution, or reddening suggesting brining of the timber post *in situ.* Nevertheless on quantitative grounds alone, only one post hole (p/h1 in building F004 from context 5264 (?sample 55)) produced enough charcoal to relatively confidently suggest a burnt out post. Some others may also represent this, but for the majority the charcoal is incidental; and may have ordinated from the soil or archaeological activity through which the posthole was cut, or arrived when the post had rotted or was removed. Limited charcoal may enter the rotting voids at surface level when the post is *in situ* otherwise the entire posthole if full of post and packing!

Hand-picked charcoal: sporadic and variable quantities of hand-picked charcoal were present (Table 2); these varied from 1 to 20+ pieces (possibly originally 1 piece). Without contextual evidence for most (88%), the assessment and selection of suitable material for identification and analysis cannot be completed.

Waterlogged wood and plant remains

A number of bulk samples from clearly waterlogged contexts were processed by mass flotation in the field and flots and residues dried. This creates some problem in assessing the value of the waterlogged remains. Sample for waterlogged plant remains and woody fragments for palaeo-environmental and palaeo-ecological interpretation are usually smaller sampled (usually 1-2 litres and 5 litres at most) and taken from very specific contexts, and often in sequences through waterlogged deposits.

Waterlogged remains provide detail information of the natural lived-in environment (ie, the plant and vegetation present on site), rather than the economic and activity-based information more clearly derived from charred remains (cereal caryopses, field weed seeds, and cereal chaff and bran).

They are processed so as to recover both flot and residues (or retent) on 250µm or 300µum mesh) as many remains do not float, and the majority are typically much smaller than cereal grain. On processing and sifting the flot and floated residues (after removal of larger stones) would normally be kept wet (ideally in IMS (Industrial Methylated Spirit) or similar, or distilled water) in light-reduced atmosphere and preferable refrigerated (but not frozen).

Desiccation of the remains is not conducive to its identification and analysis; distortion, warped, split and broken remains are hard to identify and facilitate loss of physical material and of biological data. Nevertheless, although desiccation may result in the loss of smaller remains and of difficulties with identification, the larger remains are often quantifiable and identified provide some palaeo-ecological information as Scaife demonstrated from the desiccated medieval remains at Emwell Street, Warminster, Wiltshire (in Smith 1997).

Twenty samples were waterlogged (45%), nineteen of which had waterlogged residues and waterlogged remains recovered from the residues that were dried and desiccated. Only one sample of just material recovered from the residue was kept wet (sample 49) which included slivers of wet waterlogged wood (thought to be leather), and material possibly leather, from posthole 4 in building F004.

Desiccated waterlogged plant remains

The present of waterlogged plant remains (ie fine seeds etc.) is intimated only in Tables 2 and 5, but waterlogged hazelnut shell fragments are present in 4 samples from the well F009 (samples 7, 44, 50 and 40, from 4th and 5th fills).

Feature	*Context*	*Sample*	*vol proc (litres)*	*Flot vol (ml)*	*h/nut shell*	*wood >4mm pieces*	*wood <2mm (ml)*	*Notes*
Pit F010 3rd fill	5168	38w	18.5	35w	-	/6w	5c+w	
Pit F010 3rd fill	5167	41w		50w	-	27c&w	1	Fine waterlogged detritus
Well F009 2nd fill	5159	28w	43	5	-	-	>0.1	waterlogged
Well F009 3rd fill	5197	27w		35w	-	-	-	Many ?waterlogged ?*Rubus* seeds and dust
Well F009 4th fill	5085	7w	70	1250	37	W	W	waterlogged seeds
Well F009 4th fill	5212	29w	140	2000	-	100w+c	150 c+w	Waterlogged dried plant debris
Well F009 4th fill	5198	44w	338	80w	8	100s w		Fine waterlogged detritus
Well F009	5225	50w	382	1000	4	100+w	++	Much waterlogged debris
Well F009 btwn 4th+5th fills	5225	39w	20	No flot		20ml w		Waterlogged large elements possible seeds
Well F009 5th fill	5226	40w**	706	30w	55	100+ w+c	15	Fine waterlogged detritus, possible bit of leather
p/h1 in building F004	5264	'?' 55w	9	80	-	-	-	Fine charred and w/l dust
p/h4 in building F004	5248	49	20	-	-	8w	-	Recorded as 'leather'
p/h4 in building F004	5245	42w	24	20	-	-	-	General w/l detritus
p/h6 in building F004	5241	48w	25	30	-	-	-	Fine waterlogged detritus
p/h9 in building F004	5215	34w	15	60	-	+	+	Fine waterlogged detritus
p/h9 in building F004	5152	30w	13	60w	-	-	-	waterlogged
p/h10 in building F004	5216	35w	20	150w	-	40w	+	Fine waterlogged detritus
p/h11 in building F004	5217	36w	9	60w	-	32c+w	-	Fine waterlogged detritus
p/h12 in building F004	5247	45w	8	40w	-	-	+	Fine waterlogged detritus
p/h13 in building F004	5223	37w	21	60w	-	-	+	Fine waterlogged detritus

Table 5. List of waterlogged samples.

The waterlogged samples were rapidly scanned by archaeobotanist L. Gray (Table 6) who reports many samples were organically rich dried waterlogged samples; several (6) of which were difficult to properly scan because they had dried into compact lumps and would need to be re-sieved. Although

this was not a formal assessment, the waterlogged preservation conditions are unusual in much of Southern England, and the sampling of the features was detailed enough to allow potential variations in activity to be examined in more detail. The samples recommended for analysis (Table 2) are those that contain more than uncharred/modern root/rhizome fragments and charcoal flecks. The bark/stem fragments are abundant in several samples, but are very unlikely to be identifiable.

Feature Type	Sample	Comments
Building F004		
posthole 1	55	Abundant uncharred root/rhizome fragments and charcoal flecks
posthole 10 bot	35	Very compacted. Needs re-washing. Some identifiable charcoal
posthole 11 bot	36	Compacted and needs re-washing/Occasional identifiable charcoal. Rare uncharred stinging nettle seed.
posthole 12 pipe	45	Abundant uncharred elderberry seeds and bark fragments. Identifiable charcoal.
posthole 13	37	Compacted and needs re-washing. Identifiable charcoal. Un charred ?sloe stone fragment
posthole 4 pipe	42	Occasional uncharred elderberry seed, moderate uncharred root/rhizome fragments
posthole 6 pipe	48	Charcoal flecks and indet. Stem/leaf fragments
posthole 9	34	Compacted and needs re-washing. Charcoal flecks and rare uncharred stinging nettle seeds
posthole 9 pipe	30	Occasional celery-leaved buttercup seed, moderate elderberry. Occasional charred grain tissue. Charcoal flecks
Pit F010		
3rd fill	38	Elderberry seeds, charcoal flecks. Abundant uncharred root/rhizome frags
3rd fill	41	Abundant uncharred root/rhizome fragments, occasional uncharred stinging nettle seed. Abundant indet. uncharred stem/leaf/bark fragments
Well F009		
2nd fill	28	Well-preserved charred grain in tube. (One fragment of spherical hammerscale in flot). Abundant uncharred root/rhizome fragments, some uncharred elderberry seeds. Occasional earthworm cocoons
3rd fill	27	Abundant uncharred elderberry seeds and charcoal flecks
4th fill	7	Well-preserved charred grain in tube. Hazelnut shell in bag. Abundant dried waterlogged wood fragments. Uncharred elderberry and stinging nettle seeds
4th fill	29	Well-preserved charred grain in tube. Charcoals flecks, abundant stinging nettle seeds, some elderberry, hemlock and orache-type seeds.
4th fill	44	Well-preserved charred grain in tube. Uncharred hazelnut shell in bag. Flot very compacted and needs re-washing. Some identifiable charcoal fragments
= <39> 4th & 5th fills	50	Very compacted. Needs re-washing. abundant indet. Stem/bark fragments. Occasional uncharred sedge seeds. Hazelnut shell in bag and well-preserved charred grains in tube. Dried waterlogged wood
between 4th & 5th fills	39	Well-preserved grains in tube
5th fill	40	Dried, compacted previously waterlogged plant material, not possible to get a good scan due to the flot needing re-washing. Lots of indet. waterlogged stem/leaf/bark. 4 well-preserved charred grains in tube

Table 6. Comments on waterlogged plant remains

Wood

Slivers of roundwood fragmenst are present in most of the waterlogged samples (60%). In some cases both charred and waterlogged are present and probably represent very different activities or items from site.

Leather

Samples of potential leather from context 5226 (sample 40) and 5248 (sample 49) were from the fifth fill of the well F009 and the lower fill of post pipe in PH4 of building F004 respectively. The possible

leather from context 5226 is poorly to moderate-well preserved. No obvious features were noticed but the sample was dried, desiccated, fractured and curling. That from context 5248 was slivers of wood (retained moist) and is recorded in the assessment above

Summary

The assemblages, like those from BRF 13 (Allen 2013/17), contains very few samples with cereal remains (grain/caryopses, chaff, bran etc.), or weed seeds. Charcoal remains are present throughout, and predominantly larger woody elements either twiggy or roundwood pieces. The lack of crop processing evidence on site may even suggest site specialisation.

POTENTIAL & SIGNIFICANCE

Charred Plant remains

The charred plant remains are restricted to isolated features where moderate to large numbers (15-85) of cereal caryopses were recovered; predominantly wheat/barley but some rye/oats. This and the lack of chaff is suggestive of the lack of crop processing within the vicinity of the samples features (as at BRF 13; Allen 2013/17) and that typical domestic activities were not performed on site but the grain brought to site in a prepared state for consumption. The cereal remains are predominantly from the fire-related contexts of hearth F002, but also forge F007, and charred elements disposed of in isolated samples in well F009.

The absence of these remains has the potential for examining specialised activity on site, especially as some 89 samples from BR13 and BR 14 have been assessed and show similar results. There is the potential to examine the crop (barley, wheat, oats, rye) economy, and possible determining which soils were cultivated (ie gravels or the river terrace, sandy soils of the greensand bench, calcareous soils of the Downs, or even clayey soils of the Weald).

Charcoal

Charcoal >4mm is present in most sampled contexts (Table 2 and 4); most commonly in hearth F002, furnace F007, pit F010 and sporadically in the well and postholes. These have the potential in rare cases to look at the structural timbers of building (eg, posthole 1, building F004), but in most cases represent fuel for fires, furnaces or hearths.

There is the potential to examine, therefore, the selection of wood for the hearth or furnaces, as well as more general (domestic) fires (ie pit F010, ditch F001 and well F009). The range of species may indicate the nature of local woodland, the woody element has the potential to assist in determining woodland management practices such as coppicing and pollarding etc. Overall this information will help in defining the character, function and role of the site as a whole, and its economy. In particular the location of the woodland, i.e. floodplain, drier river terraces, the Weald or the Chalk may potentially be determined, and assist in determining the wider landscape exploitation and management relating to the activities here.

Waterlogged plant remains

The waterlogged contexts are common in the well, pit F010 and deeper postholes of building F004 (Table 5). Waterlogged plant remains from these are important because they provide non-economic evidence about the local lived-in landscape. The presence of moderate to large quantities of hazelnut shells in the well for instance indicate hazel trees in the vicinity or the collection of these nuts, but are not represented in charred assemblages. Waterlogged seeds may include *Utrica*, nitrogen-loving plants, or plants of disturbed ground or pasture – evidence otherwise only available in pollen spectra (subsamples were taken assessment not commissioned from the road side ditch and 'occupation' layer over the road (Allen 2013; 2013/17, 8).

Concluding comments

The charred remains are predominant charred wood and there is, in view of the archaeological features, relatively little charred plant remains and detritus including in particular chaff (glume basis, rachis fragments, lemma etc.) This may argue for the area excavated and sampled relating more to craft industries than domestic settlement and habitation.

What is important and significant here is the presence and preservation of waterlogged remains from not just a well (F009), but also deeper posthole from building F004, and deeper pits (eg, F010). Waterlogged plant remains are rarely preserved in southern England, and significantly the evidence compliments that from the charred assemblages; the two sets of material are largely mutually exclusive and almost wholly complimentary.

The combination of recovery or charred plant remains, charcoal, waterlogged wood and waterlogged plant remains make this an important site in at least regional terms, and there is a very high potential to assist in the impetration of the setting, landscape and land-use change, economy site and feature-special functions and interpretation at a local and wider scale making a significant contribution to the overall site interpretation.

Review after phasing (May 2018)

Assessment and selection for analysis was undertaken without any phasing (January 2018), and subsequent to analysis of the charred and waterlogged plant and charcoal remains by Gray, phasing was supplied. The analysis report was revised, phasing added to this assessment tables (Table 2 and Appendix 1), and data reviewed in light of the phasing information to ensure that a full and balanced selection had been made for analysis. The majority of the samples (91%) fall into period 6 (AD 25-410),

and only four samples fall in to earlier (period 4-5; AD 70-250) phases. Two of these were analysed, and the other two contained no or virtually no remains. Consequently the selection of samples presented in Tables 2, 7 and 8 is a representative chronological sample.

Summary

An extensive suite of bulk samples and a moderate processing programme has enabled the assessment of 87 samples from the 2013 and 2014 seasons covering a range of features. Preservation of charred and waterlogged plant is indicated and an analysis programme is proposed.

It is noted however, that great caution must be taken when undertaking analysis from more than one season and sample numbers at least are not unique to each season. Unfortunately sample numbers have been duplicated/repeated for each season; compare table 1 (BRF 13; Allen 2013/17) and table 2 (BRF 14).

Recommendations

Despite a lack of phasing for any features from the BRF 14 contexts, a range of assemblages have been selected for analysis based on the preserved remains (Tables 2 and 6) and the contextual information (Table 2). Phasing was supplied *after analysis* and added to tables 2 and Appendix 1 for archive and review purposes.

These recommendations can be reviewed in conjunction with those from BRF 13 to provide a comprehensive and valuable analytical programme which would make a significant contribution to the archaeology of southern England.

The samples for analysis are presented in the full assessment tables, and listed in table 7and summarised in table 8. It is recommended that ideally a single analyst undertakes the analysis of the waterlogged and charred remains. In the long run this is both cost-effective and academically most appropriate. Many charcoal analysers do not undertake analysis of plant remains and *vice versa.* Not all plant remains specialists are able to analyse waterlogged remains. There are relatively few analysts that can undertake charred and waterlogged remains, and charred/waterlogged wood identifications and analysis.

	rewash	*Cpr*	*Charcoal*	*Wood frags*	*Waterlogged*
BRF 13		30, 4, 3, 2, 8	25, 30, 3, 2, 27, 9, 1, 14, 35 (4010), 21, 16	28	3, 13, 28
BRF 14	34, 35, 36, 49, 44, 50	1, 2, 5, 7, 29, 40	1, 5, 38, 8, 29, 40, 53, 55, 36	7, 29, 50 + 1 other	Building F004: 34, 35, 36, 37, 45 Well F009: 7, 27, 28, 29, 40, 44, 50

Table 7. List of samples recommended for analysis

Assessment of 2013 and 2014 have made recommendations for analysis.

	Cpr	*Charcoal*	*Wood frags*	*Waterlogged*
BRF 13	5	12	1	3
BRF 14	6	9	4	12
Total	11	21	5	15

Table 8. Totals of sample selected by material type and excavation year

Tasks

1. Isolation of the specific charred / charcoal remains in the flots.
2. Preparation of the sample material and appropriate documentation and dispatch

3a. Identification, analysis and reporting of the charred plant remains

3b. Identification, analysis and reporting of the charcoal remains

3c. Identification, analysis and reporting of the waterlogged plant remains

3d. Identification, analysis and reporting of the waterlogged wood remains

4. Editing, collation, archive and publication report preparation
5. Managing, commissioning, liaison (archaeologist and specialist) editing

NB. The costs of the proposed analysis programme is provided separately

Archive

The assessed flots from BRF 13 are with the excavations excepting sample 16 (from tile lined pit 3060) which was sent to Cath Edwards (AOC) on 22/11/2013

The assessed flots from BRF 14 are currently (28 Jan 2018) with the author.

Acknowledgements

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List of sample elements supplied (from bulk samples)

Phase / Date	Feature type	Feature	Context	Sample	Flot	Residue				
						Charcoal	Grain	Nuts	Wood	Leather
Period 5-6	Hearth	F002	5017	1	✓		✓		✓	
Period 6B-C	Forge	F007	5004	2	✓		✓			
Period 6B-C	p/h	5035	5034	3	✓					
Period 6B-C	p/h	5035	5043	4	✓					
Period 6B-C	Forge	F007	5053	5	✓					
Period 5-6	Hearth	F002	5064	6	✓					
Period 6B-C	Well	F009	5086	8	✓				✓	
Period 4	Ditch	F001	5085	7	✓		✓	✓		
Period 6	p/h2	In F004	5118	10	✓				✓	
Period 6	p/h3	In F004	5120	11	✓				✓	
Period 6	p/h4	In F004	5122	12	✓					
Period 6	p/h8	In F004	5130	16	✓				✓	
Period 6	p/h10	In F004	5134	18	✓					
Period 6	p/h11	In F004	5136	19	✓					
Period 6	p/h8	In F004	5140	21	✓					
Period 6	p/h9	In F004	5142	22	✓					
Period 6	p/h2	In F004	5144	23	✓					
Period 6	p/h3	In F004	5148	24	✓					
Period 6B-C	Well	F009	5194	25	✓					
Period 6B-C	Well	F009	5195	26	✓				✓	
Period 6B-C	Well	F009	5197	27	✓					
Period 6B-C	Well	F009	5159	28	✓					
Period 6B-C	Well	F009	5212	29	✓				✓	
Period 6	p/h9	In F004	5152	30	✓					
Period 6	p/h7	In F004	5213	31	✓					
Period 6	p/h8	In F004	5201	32	✓					
Period 4-6	p/h	bdg F001	5187	33	✓					
Period 6	p/h9	In F004	5215	34	✓				✓	
Period 6	p/h10	In F004	5216	35	✓					
Period 6	p/h11	In F004	5217	36	✓					
Period 6	p/h13	In F004	5223	37	✓					
Period 6	Pit	F010	5168	38	✓					
Period 6B-C	Well	F009	5225	39			✓		✓	
Period 6B-C	Well	F009	5226	40	✓		✓	✓	✓	
Period 6	Pit	F010	5167	41	✓					
Period 6	p/h4	In F004	5245	42	✓					
Period 6B-C	Well	F009	5198	44	✓			✓	✓	
Period 6	p/h12	In F004	5247	45	✓					
Period 6B-C	Well	F009	5226	46						✓
Period 6	p/h6	In F004	5241	48	✓					
Period 6	p/h4	In F004	5248	49	✓					✓
Period 6B-C	Well	F009	5225	50	✓		✓	✓✓	✓✓	
Period 6	p/h1	In F004	5261	53	✓					
Period 6	p/h1	In F004	5263	54	✓					
Period 6	?? p/h1	In F004	5264	'?'	✓					
Period 6	?? p/h1	In F004	5264	'?'	✓					

List of hand recovered charcoal

Phase / Date	*Feature type*	*Feature*	*Context*	*Sample*	*Flot*	*Residue*				
						Charcoal	*Grain*	*Nuts*	*Wood*	*Leather*
			5000	-		5				
			5001	-		3+				
			5003	-		2				
			5006	-		M				
			5009	-		M				
			5018	-		+				
			5037	-		3				
			5059w	-		5+				
			5061	-		2				
			5065	-		3				
			5102	-		1				
			5111	-		1				
			5116	-		3				
			5118	-		1				
			5128	-		2				
			5136	-		3				
			5152	-		2				
			5159	-		M				
			5167	-		M				
			5200	-		1				
			5206	-		M+8				
			5262	-		1				

Note data in assessment table (Table 2) supersedes any data recorded here.

16.11.2 Report on the Palaeo-environmental remains: charred plants, waterlogged plants and charcoal remains from BRF 14 by Lisa Gray, MSc, MA, ACIfA (edited by Michael J. Allen)

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This report describes plant macro-remains recovered from samples excavated during the 2014 season community excavation of a large Roman settlement by Culver Archaeology Project that commenced in 2011 (CAP & AOC Archaeology Group 2013). It follows an assessment by Dr Michael Allen (Allen 2018) with a contribution from the author that led to the selection of 22 of 43 samples from the BRF14 season for the analysis of charred and waterlogged plant remains and charcoal. These samples are listed in table 1.

Methods

Samples were taken and processed using a Siraf-type flotation device by volunteers from Culver Archaeology Project (Allen 2018). Flot was collected in a 300µm mesh sieve then dried. Residues, nor material sorted from them was supplied.

Following assessment (Allen 2018), the author scanned the flots under a low powered stereo-microscope with a magnification range of 10 to 40x. The entire flots were examined for most samples, however, two (samples 7 and 29 from well F009) contained hundreds of waterlogged seeds so were subsampled using a riffle box with 50% of the flot of sample 7 and 25% of the flot of sample 29 examined. The abundance, diversity and state of preservation of eco- and artefacts in each sample were recorded. A magnet was passed across each flot to record the presence or absence of magnetised material or hammerscale.

Identifications of seeds and cereals were made using uncharred reference material (the author's and the Northern European Seed Reference Collection at the Institute of Archaeology, University College London) and reference manuals (eg, Beijerinck 1947; Cappers *et al.* 2006; Charles 1984; Fuller 2007; Jacomet 2006). All data has was recorded in an Excel database (archive). Plant nomenclature follows Stace (2010). All seeds and cereal grains were quantified with embryo ends of fragmented grains being counted. Fragments of uncharred root/rhizome, unidentified charcoal, dried waterlogged stem/leaf fragments and unidentified dried waterlogged wood fragments were given estimated levels of abundance.

Only fragments of charcoal >4mm or roundwood or twigs > 2mm were identified, as these are large enough to fracture and observations cross- and tangential sections necessary for identification (Asouti 2006, 31; Smart & Hoffman 1988, 178-179). Charcoal identifications were made using the authors modern reference slides and anatomical guides (Gale & Cutler 2000; Hather 2000; InsideWood 2004; Schoch *et al.* 2004; and Wheeler 2011).

Phasing

The relevant sample phases are as follows:

Period 3: AD43-70

Period 4: AD 70-150
Period 5: AD 150-250
Period 6: AD 250-410
6A: AD 250-300
6B: AD 300-350
6C: AD 350-410

Results

Plant remains were preserved by charring and waterlogging (Tables 2-6). Charred plant remains consisted of cereal grains, seeds and charcoal. No chaff was present.

Charred plant remains (cereals and seeds)

Samples examined for charred plant remains and included samples from hearth F002, forge F007 (samples 2 and 5), well F009 (samples 7, 29, 39, 40, 44, and 50), and posthole 9 of building F004 (sample 30).

The most significant feature of the charred plant remain assemblages from BRF14 is the absence of chaff. This absence could be due to poor preservation, processing issues (see below) or that processing did not occur on around the sampled features and only fully processed cereals were taken to the site. Flecks and fragments of charcoal were present in most samples.

Cereal grains were found in samples from hearth F002 (Table 2), forge F007 (Table 4), building F004 (Table 3) and well F009 (Table 5). The cereal grains were mostly well-preserved, but identification was difficult because no chaff was present to support this. Grain identification was made on the morphology of the grains only. Most grains were found in the samples from hearth F002, and well F009 (samples 7 and 29). One germinated spelt grain was found in the subsample from well F009 (sample 29). The most frequently occurring grains were those of spelt (*Triticum spelta* L.). These grains were found in hearth F002 and well F009. The next most frequent grains were those of bread/club/rivet (*T. aestivum/durum/turgidum*), hulled barley (*Hordeum distichon/vulgare*) and bread/club/rivet/spelt wheat. These were found in hearth F002, forge F007and well F009. Emmer (*T. dicoccum*) grains were found in samples from hearth F002 and well F009. Grains with the morphology of emmer/spelt were found in the sample from hearth F002. Low numbers of rye (*Secale cereale* L.) grains were found in hearth F009, forge F007 and well F009. The subsample from well F009 (sample 29) contained an oat (*Avena* sp.) grain. Samples from heath F002 and well F009 (sample 7) contained low numbers of twisted barley grains. The lack of barley chaff meant that it was not possible to identify these grains as 2 or 6-rowed varieties.

Seeds were scarce and consisted of two rye-grass/fescue (*Lolium/Festuca* sp.) seeds in from the hearth F009 and one vetchling/vetch/pea (*Lathyrus/Vicia/Pisum* sp.) from the sample from the forge F007.

Waterlogged Plant Remains

Six samples from well F009 (Table 5), and seven from building F004 (Table 3) were analysed for their waterlogged plant macro-remains. Degraded fragments of stem/leaf tissue were frequent in the dried-waterlogged samples, and a number of uncharred root/rhizome fragments are probably modern. The remaining waterlogged plant remains consisted of wild plant seeds, fruit stones and nut shell. Whole hazelnuts (*Corylus avellana* L.) and fragments of nutshell were found in four samples from well F009 (Table 5). Fruit stones of wild plum (*Prunus domestica* L.) and blackthorn (*P. spinosa*) were found in two samples from well F009 (samples 39 and 50) and posthole 13, building F004.

Most waterlogged seeds were found in well F009. All were from native plants and none from cultivars. Seeds from several plants that produce edible leaves and berries are in this waterlogged assemblage. These could have been growing near the features or have been gathered for food. Most seeds were

from plants common in waste and disturbed nutrient rich ground. The most frequently occurring seeds in all feature types were those of elderberry (*Sambucus nigra* L.) and seeds of the goosefoot (Amaranthaceae) family. Seeds of common/hastate orache (*Atriplex patula/hastata*), stinging nettle *(Urtica dioica* L.) and fat hen (*Chenopodium album*) were common. The significance of these numbers needs to take account of the fact that individual orache plants can produce up to 6000 seeds and fat hen up to 20,000 (Hanf 1983, 215 and 217). One elder tree and one stinging nettle plant can also produce thousands of seeds. This is the case for all the plants listed. Seeds from plants of damp ground, such as gypsywort (*Lycopus europaeus* L.) and club rush (*Schoenoplectus* sp.) were present in low numbers in three well samples (samples 7, 29 and 50).

Charcoal

Samples for were analysed for charcoal from hearth F002, the main fill of ditch F001, well F009 (samples 29, 40), pit F010, and posthole 1, building F004. One sample from posthole 5035 (sample 3) contained no fragments of charcoal suitable for identification.

Oak (*Quercus* sp.) charcoal was the most frequently occurring taxa and found in samples from heath F002, ditch F001 (11 fragments), well F009 (samples 29, 38, and 40), and posthole 1 building F004. Cherry/plum (*Prunus* sp.) charcoal was found in samples from ditch F001 (2 fragments), hearth F002, well F009 (samples 29 and 38) and posthole 1 building F004. Ash (*Fraxinus excelsior* L.) charcoal was found in samples from well F009 (sample 38) and posthole 1 of building F004 (samples 53 and 55). Birch (*Betula* sp.) charcoal was found in samples from well F009 (sample 29), pit F010, and posthole 1 of building F004 (sample 55). Posthole 1 (sample 55) also contained a fragment of yew (*Taxus baccata* L.) charcoal. Fragments of alder (*Alnus glutinosa* L.) and hazel were found in sample from the well (sample 29). The two hazel fragments were the only pieces of roundwood charcoal in this charcoal assemblage. These fragments were 10mm in diameter and had five growth rings. Alder, native birch, cherry/plum, and native oak cannot be differentiated based on their microscopic wood anatomy alone. (Schoch *et al.* 2004).

Dried waterlogged wood

Hundreds of dried waterlogged wood fragments were present, but these fragments were small and poorly preserved. Small samples of larger fragments were taken from samples of well F009 (samples 29, 44 and 50) and were soaked in freshwater for 48 hours to see if they could be identified. The only fragments that were clearly identifiable in each sample were oak fragments and these were only clear from the transverse sections. Each sample also contained fragments resembling oak/ash from the transverse sections only. Samples 29 and 50 contained fragments of alder/birch, identified on transverse section porosity and number of rays alone. The distinctive sclariform plates did not survive. Fragments of cherry/plum/birch and possible cherry/plum (identifications based on transverse section porosity and number of rays with no perforation plates or spiral thickening surviving), were present in sample 40 of the well.

Discussion

Preservation, stratigraphic integrity, bioturbation and sample processing

Plant macro-remains were preserved by charring and waterlogging. None were preserved by mineralisation (Green 1979, 281) or silicification (Robinson & Straker 1990), which means that there is no archaeobotanical evidence for the cess disposal or slow-burning aerated fires. Most of the plant remains in these samples were preserved by charring. Charring occurs when plant material is heated under reducing conditions where oxygen is largely excluded leaving a carbon skeleton resistant to decay (Boardman & Jones 1990, 2). These conditions can occur in a number of circumstances including charcoal clamp, the centre of a bonfire, an oven or when a building burns down with the roof excluding

the oxygen from the fire (Reynolds 1979, 57). Waterlogged plant remains are found in permanent high ground water conditions which inhibits decay, and at Bridge Farm seasonally high ground water tables give rise to occasional locally waterlogged deposits, especially in deeper features.

Some processing and recovery methods have influenced the presence and recovery archaeobotanical remains from these samples. The waterlogged plant remains had been dried after processing by bulk flotation (Allen 2018) rather than being kept wet (and smaller samples processed by hand washover flotation). Consequently some loss and damage to waterlogged plant remains may have occurred. This was evident in the dried waterlogged wood fragments. Flotation does not always enable all grains and nutshell to float, and although some were observed in the residues, they had been sorted by eye by volunteers and not presented for the assessment (Allen 2018) resulting in an under-representation of charred plant remains in any assessment and analysis. It is possible that chaff did not float, although it is unusual for grains and nutshell not to float using a Siraf-type flotation system.

Most samples contained abundant fragments of modern root/rhizomes. Low numbers of earthworm cocoons were found in samples from top fill of the hearth F002, postholes 1 and 11 of building F004 (samples 55 and 19), and well F009 (samples 29 and 50). Bioturbation is evident in the abundant root/rhizome fragments and occasional worm cocoons from roots and earthworm activity could have moved small plant remains between layers, and could have enabled the stratigraphic movement of small items (seeds and small stones) up to a metre down into the soil (Darwin 1881; Canti 2003, 143). With regards samples with a very low number of counted items per litre of sampled soil bioturbation and resilient residual material including charred plant remains need to be considered when assessing the significance of an archaeobotanical assemblage. A survey of intrusion and residuality in the archaeobotanical record for southern and central England has highlighted the problem of individual durable charred plant remains being residual or moved between contexts by bioturbation (Pelling *et al*. 2015) making both interpretation and selection of induvial items for radiocarbon dating problematic.

Feature function and possible activities at the site

Although the sampled features have been phased and dated, the majority belong to period 6 (AD 250-410) and only the two samples from ditch F001 and hearth F002 date to earlier phases (period 4-5 AD 70-260), see Table 1. This does not allow the examination of changes in function and economy over time from the analysed assemblages.

There is no evidence for cess disposal in these samples because no plant remains were preserved by mineralisation and no large accumulation of edible food plant waste was present. There is also no evidence for crop processing in the form of cereal chaff. The grains are clean. One spelt grain in sample from well F009 (sample 29) had geminated so it is possible that the grains at this site were being stored prior to consumption (Van der Veen 1989).

The well contained remains of waterlogged roundwood at the base (not presented for analysis), that might have been a part of a wattle structure. The archaeobotanical assemblage seems to be dominated by plant debris from the surrounding environment and not by food waste. Some of the plants represented are edible but it is not possible to tell if they were simply growing near the wells or were waste from human consumption. It is also not wise to consider the number of seeds from certain species as significant because individual plants can produce thousands of seeds. The well infill could be the general accumulation of debris, or backfilling after disuse. The well seems to contain hearth-type waste because the charred grain assemblage from hearth F002 is similar to that from sample 29 in the well. The well samples, not surprisingly, are the only ones that contain seeds from plants of damp ground.

The postholes in building F004 contain charred grains and occasional waterlogged seeds in low numbers. Hinton's review of Sussex archaeobotany, however, shows that in most sites seeds are dispersed from various parts of the site and find their way into postholes and 'cannot do more than demonstrate that they were present during the occupation of the site' (Hinton 1984, 6). These charred and waterlogged plant remains are more likely to be general background waste than indicate any specific activity taking place in the building.

Hearth F002 has been considered to be a possible smelting hearth or oven; it contained a varied charred grain assemblage and two grass seeds. This assemblage could be fine sieving waste used as tinder, or possibly are residual plant remains. The only species of wood charcoal recovered was oak, a high-temperature burning species, and this may suggest specific selection of fuel for a hearth or oven.

Samples from the primary fill of the forge F007 and well F009 (sample 28) contained artefactual evidence for black-smithing in the form of hammerscale. Two fragments of flake hammerscale were found in a sample from the well, and one spherical fragment from the forge. Hammerscale is formed when metal is struck during iron working. Flake hammerscale is a result of the mechanical or thermal shock when iron is forged and spheroidal hammerscale is formed when droplets of liquid slag solidifies when it is expelled from the iron during hot working (Starley 1995). Their presence here indicates metalworking in the vicinity.

The charcoal taxa are those that have uses as fuel and craft woods. Well-seasoned oak burns slowly giving off a 'good lasting heat' (Skellern 2000); alder wood makes good charcoal (Gale & Cutler 2000, 34), and cherry/plum/sloe wood could have been used as fuel, possibly kindling. The charcoal from posthole 1 (sample 55) is that of several taxa rather than from the post.

Plant foods and cereal processing

The edible cultivars present were grains of wheat, barley, oat and rye. The lack of chaff has meant that it is not possible to be certain about the species of wheat and barley but the morphology of the grains were those of bread/club/rivet wheat, emmer wheat and spelt wheat. The low number of these grains per litre of sampled soil means that even if the features were dated these charred plant remains may be residual and not directly related to the specific features sampled. Emmer, spelt and barley have been found in prehistoric and Romano British samples and rye and free-threshing type wheat more common in Anglo-Saxon to Medieval samples in South-Eastern England (Thomas 2008, 10). These cereals are common in Romano-British charred plant assemblages in Sussex, for example Rookery Hill, Bishopstone (Arthur 1977), Pallant House, Chichester (Stevens 2008) and Fishbourne palace (Pelling 2003; 2012).

The lack of any chaff and only three charred weed seeds in these samples does suggest that at this site, or at this part of the site, cereals were being consumed rather than prepared for consumption. This contrasts with other sites in Sussex where corndriers and threshing floors have been examined and found to contain abundant chaff and weed seeds alongside grain, for example at Bishopstone (Arthur 1977, 273), Wivelsfield (Barnett *et al* 2015), Thundesrsbarrow and East Dean (Hinton 1984, 6) and Bullock Down (Arthur 1982; Rudling 2003, 117). It is possible that Bridge Farm, or the currently excavated parts of Bridge Farm, will become an example of a consumer site for grains, one that stored, sold and milled clean grain, and possibly included activities such as milling and bread-making.

The edible wild or gathered plants in these samples were blackberry, elderberry, fat hen, stinging nettle, hazelnut, sloe and wild plum. The presence of these seeds in the sampled features need not necessarily be due to them being used for food, craft or medicine; but they may just be a part of the locally growing plants. The leaves and young shoots of fat hen are edible (Polunin 1969, 69), as are the

leaves of stinging nettle if cooked (Mabey 1989, 47). Nettle has been linked with Roman occupation but the *Urtica dioica* seeds in these samples are from a native plant and not the introduced *U. pilulifera*, and that here is unlikely to have been introduced into the British Isles by the Romans (Lodwick 2014). Of the plants present here, hazelnuts, orache (*Atriplex* sp.), poppy, plum and violet, are mentioned by Pliny in his '*Natural History*' as having culinary and medicinal uses (Farrar 1998). If the elderberries were eaten by the Romano-British inhabitants at Bridge Farm the might have formed part of a dish cooked with eggs and pepper (Edwards 1984, 66).

No exotic plant remains were found among the charred or waterlogged assemblages. These tend to be found in more urban Roman waterlogged deposits (Willcox 1977; Livarda 2011) and were absent from the well. This does not preclude these being discovered in future work at Bridge Farm especially if cess pits are found and sampled.

Comparisons with previous work at Bridge Farm and with similar sites in the region.

The 2006 evaluation of Culvermead Field, Culver Farm, Barcombe revealed evidence of a Roman iron working (Wallace 2013, 2 and 22). The only plant remains recorded to date were large well-reserved waterlogged timbers.

Charred grains, charred seeds, charcoal and waterlogged wood were present from BRF13 (Rudling 2014; Wallace 2014), and as with the 2014 assemblages, wood and charcoal of oak, birch, hazel and alder round-wood were recovered with a large quantity of charcoal from the kiln features comprising oak fragments and small birch round-wood (Robertson 2017, 32). Cereal grains recovered from the 2013 season seem to be confined to pits 3003 and 3008, and generally absent from the rest of the samples, which suggests that if domestic and crop processing activities were present, they did not occur within, or adjacent to, the areas excavated in 2013 (Allen 2017, 26-27). This appears to be the case for the 2014 samples.

The main difference between the 2013 and 2014 season's assemblages was that cereal chaff was found in two grain-rich samples in the 2013 season (Allen in Wallace 2014). The quern fragments found in Roman deposits (Millum 2017, 22 and 30) seem to support the likelihood that this site was a consumer site with grain ready for consumption rather than needing to be processed. A similar situation was Pelling's interpretation of the archaeobotanical remains at the 'romanised civilian settlement or villa' at Fishbourne (Pelling 2006, 130).

Roman wells excavated in Sussex at the Roman fortress at Pevensey, East Sussex (Reid & Lyell 1908) and Chichester, West Sussex (Stevens 2008, 89) had very similar assemblages of well plant seeds to those at well F009 at Bridge Farm, with no mineralised plant remains. It is possible that refuse disposal took place in another part of the site and that the well was kept clean for use.

Environment

The waterlogged plant remain assemblage contained plants from disturbed ground, nutrient-rich ground, damp ground, hedgerow and scrub. The damp ground plants were found in the well samples. Seeds of stinging nettle were the most numerous and these were found in well samples 7, 29 and 50. This plant frequents nitrogen-rich, loose, humic soils (Hanf 1983, 338). Seeds of elderberry were frequent and present in samples from building F004 and well F009. Elder trees grow in woods, scrub, roadsides, especially characteristic of base and nitrogen rich soil (Clapham *et al.* 1952, 1001). Nutrient rich, disturbed and damp ground is the type of environment evoked by the waterlogged plant remains in these samples.

Recommendation of items for Radiocarbon Dating.

The charred grains and seeds were found in samples 1 (hearth F002), 2 and 5 (forge F007), and 7, 28, 29, 39, 40, 44 and 50 (well F009) could be selected for dating. Suitable short-lived charcoal taxa were found in samples 8 (ditch F001), 29 (well F009), 38 (pit F010) and 55 (posthole 1, building F004).

Future work

The archaeobotanical research potential is high, particularly as waterlogged preservation is present which is rare in South-Eastern England. Such conditions are highlighted a 2007 review of the state of the archaeobotany of Roman Britain (Van der Veen *et al*. 2007). If waterlogged Late Iron Age (or earlier) deposits are found at Bridge Farm they would be regionally very important. Waterlogged and mineralised remains may also help in the study of the importation of exotic plant foods from the Mediterranean (Van der Veen *et al*. 2007).

It would be prudent in future to hand pick larger items of worked wood and roundwood and keep them wet, wrapped in plastic to preserve them for identification. The high number of waterlogged wood fragments in these samples means that they will need to be subsampled.

Waterlogged contexts need to be isolated in the field and subsampled (1-5 litres) processed by washover bucket flotation.

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16.2.3 Catalogue of the Palaeo-environmental remains: charred plants, waterlogged plants and charcoal remains by Lisa Gray, MSc, MA, ACIfA (edited by Michael J. Allen)

TABLES

Feature	Feature Type	Context	Sample Number	CAP Period / Phase (AD)	Sample Details	Whole earth samples litres	Flot volume	Analysis
F001	ditch	5086	8	4 (70-150)	main fill	not given	15	charcoal
F002	hearth	5017	1	4-5 (70-250)	top fill	30	50	charred plant remains (CPR) and charcoal
F004	posthole 1 in building	5261	53	6 (250-410)		16	15	charcoal
F004	posthole 1 in building	5264	55	6 (250-410)		9	80	charcoal
F004	posthole 2 in building	5144	23	6 (250-410)	pipe	60	115	WLG
F004	posthole 9 in building	5152	30	6 (250-410)	pipe	13	60	WLG
F004	posthole 9 in building	5215	34	6 (250-410)		15	60	WLG
F004	posthole 10 in building	5216	35	6 (250-410)	bottom fill	20	150	WLG
F004	posthole 11 in building	5136	19	6 (250-410)		18	76	CPR
F004	posthole 11 in building	5217	36	6 (250-410)	bottom fill	18	60	WLG
F004	posthole 12 in building	5247	45	6 (250-410)	pipe	8	40	WLG
F004	posthole 13 in building	5223	37	6 (250-410)		21	60	WLG
F007	forge	5004	2	6B-C (300-410)	top fill	10	20	CPR
F007	forge	5053	5	6B-C (300-410)	primary fill	not given	170	CPR
F009	well	5085	7	6B-C (300-410)	forth fill = <29+44>	70	1250	CPR & waterlogged plant remains (WLG)
F009	well	5212	29	6B-C (300-410)	forth fill = <44+7>	140	2000	WLG & charcoal
F009	well	5225	39	6B-C (300-410)	between 4th +5th fills	20	no flot	WLG
F009	well	5226	40	6B-C (300-410)	5th fill	706	30	CPR, WLG & charcoal
F009	well	5198	44	6B-C (300-410)	forth fill = <7+29>	338	80	WLG
F009	well	5225	50	6B-C (300-410)	fill = <39>	382	1000	WLG
F009	well	5159	28	6B-C (300-410)	secondary fill	43	20	WLG
F010	pit	5168	38	6B-C (300-410)	third fill = <41>	18.5	not given	WLG and charcoal

Table 1: Sample Details (note sample 28 context 5159 was labelled F010 but is presumed to be F009)

	Phase	**4-5**
	Feature	**F002**
	Feature Type	**hearth**
	Context	**5017**
	Sample Number	**1**
	Sample Details	**top fill**
	Whole earth bulk volume	**30L**
	Flot Volume	**50ml**
	Percentage sorted	**100%**
	Counted Items Per Litre of Sampled Soil	**4**
Charred Plant Remains - Cereals		
Hordeum distichon/ vulgare L. (straight hulled grain)	two or six-rowed barley	6
Hordeum distichon/ vulgare L. (straight naked grain)	two or six-rowed barley	1
Hordeum vulgare L. (twisted hulled grain)	six-rowed barley	3
Secale cereale L	rye	1
Triticum aestivum/ spelta L. (grain)	bread wheat/spelta	1
Triticum aestivum/durum/turgidum L.(grain)	bread/club/rivet wheat	3
Triticum dicoccum L.(grain)	emmer	6
Triticum dicoccum/spelta (grain)	emmer/spelt	3
Triticum sp. (grain)	indeterminate wheat	3
Triticum spelta L. (grain)	spelt	48
Charred Plant Remains - Seeds		
Lolium/Festuca sp. (seed)	rye-grass/fescue	2
Charred Plant Remains - Charcoal		
Quercus sp.	oak	15
Charred Plant Remains - Miscellaneous		
Unidentified charcoal flecks <4mm		++++
Dried Waterlogged Plant Remains		
Nutrient Rich Waste and Cultivated ground		
Atriplex prostrata/patula (seed)	spear-leaved /common orache	10
Chenopodium album L.(seed)	fat hen	2
Scrub, Hedgerow, Woodland		
Rubus fruticosus L.agg. (seed fragment)	blackberry	1
Rubus fruticosus L.agg. (seed)	blackberry	1
Dried Waterlogged Plant Remains -Miscellaneous		
Unidentified root/rhizome fragments		+++++
Fauna		
Earthworm cocoons		+

Key to Estimated Quantities: ++++ = 151-250., +++++ = >250

Table 2: Plant remains in Hearth F002

Feature (all features in Phase 6)		ph 1	ph 1	ph 10	ph 11	ph 11	ph 12	ph 13	ph 2	ph 9	ph 9
Context		5261	5264	5216	5136	5217	5247	5223	5144	5152	5215
Sample Number		53	55	35	19	36	45	37	23	30	34
Sample Details		-	-	bottom fill	-	bottom fill	pipe	-	pipe	pipe	-
Whole earth bulk volume (L.)		16	9	20	18	18	8	21	60	13	15
Flot Volume (ml		15	80	150	76	60	40	60	115	60	60
Percentage sorted		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Counted Items Per Litre of Sampled Soil		<1	3	0	<1	<1	17	<1	<1	<1	<1
Charred Plant Remains - Cereals											
Triticum aestivum/durum/turgidum L.(grain)	bread/club/rivet wheat	-	-	-	-	-	-	-	-	1	-
Charred Plant Remains - Charcoal											
Betula sp.	birch	-	5	-	-	-	-	-	-	-	-
Fraxinus excelsior L.	ash	3	2	-	-	-	-	-	-	-	-
Prunus sp.	cherry/plum	-	3	-	-	-	-	-	-	-	-
Quercus sp.	oak	-	17	-	-	-	-	-	-	-	-
Taxus baccata L.	yew	-	1	-	-	-	-	-	-	-	-
Charred Plant Remains - Miscellaneous											
Indeterminate plant tissue fragment		-	-	-	-	-	-	-	+	-	-
Unidentified charcoal fragments >4mm		-	-	-	+	-	-	-	-	-	
Unidentified charcoal flecks <4mm		-	++++	-	+++	+	++	+++	++	+++++	+++++
Dried Waterlogged Plant Remains - *Nutrient Rich Waste and Cultivated ground*											
Atriplex prostrata/patula (seed)	spear-leaved /common orache	-	-	-	-	-	-	-	3	-	-
Polygonum aviculare L. (seed)	knotgrass	-	-	-	-	-	-	-	1	-	-
Solanum nigrum L. (seed)	black nightshade	-	-	-	-	-	-	-	4	-	-
Damp Ground											
Conium maculatum L. (seed)	hemlock	-	-	-	-	-	-	-	-	-	1
Conium maculatum L. (seed fragments)	hemlock	-	-	-	-	-	-	1	-	-	-
Scrub, Hedgerow, Woodland											
Prunus spinosa L. (seed fragment)	sloe/blackthorn	-	-	-	-	-	-	2	-	-	-
Prunus spinosa L. (seed))	sloe/blackthorn	-	-	-	-	-	-	1	-	-	-
Rubus fruticosus L.agg. (seed fragment)	blackberry	-	-	-	1	-	-	-	-	-	-
Rubus fruticosus L.agg. (seed)	blackberry	-	-	-	-	-	-	1	-	3	-
Sambucus nigra L. (seed fragment)	elderberry	-	-	-	1	2	131	-	-	4	-
Sambucus nigra L. (seed))	elderberry	-	-	-	-	-	4	-	1	5	-
Dried Waterlogged Plant Remains -Miscellaneous											
Unidentified deteriorated wood fragments		-	-	++	-	+	-	-	-	-	+++
Indeterminate stem. leaf fragments		-	-	+++	-	++	+++	+++	+++	+++	++++
Unidentified root/rhizome fragments		-	+++++	-	+++++	+	-	++	+++++	+	++

Feature (all features in Phase 6)	ph 1	ph 1	ph 10	ph 11	ph 11	ph 12	ph 13	ph 2	ph 9	ph 9
Fauna										
Earthworm cocoons	-	+	-	+	-	-	+	-	-	-

Key to Estimated Quantities: + =1-10 items, ++ =11-50 items, +++ = 51-150, ++++ = 151-250., +++++ = >

Table 3: Plant macro-remains in Building F004 (ph = posthole)

Feature (Phase 6B-C)		F007	F007
Feature Type		**forge**	**forge**
Context		**5004**	**5053**
Sample Number		**2**	**5**
Sample Details		**top fill**	**primary fill**
Whole earth bulk volume		**10L.**	**not given**
Flot Volume		**20ml**	**170ml**
Percentage sorted		**100%**	**100%**
Counted Items Per Litre of Sampled Soil		**1**	**?**
Charred Plant Remains - Cereals			
Secale/Triticum sp. (grain fragments)	rye/wheat	3	-
Triticum aestivum/durum/turgidum L.(grain)	bread/club/rivet wheat	3	2
Charred Plant Remains - Seeds			
Lathyrus/Vicia/Pisum sp. (seed fragment)	vetchling/vetch/pea	1	-
Lolium/Festuca sp. (seed)	rye-grass/fescue	-	-
Charred Plant Remains - Miscellaneous			
Indeterminate plant tissue fragment		+	++
Unidentified charcoal flecks <4mm		++++	+++++
Dried Waterlogged Plant Remains			
Nutrient Rich Waste and Cultivated ground			
Persicaria lapathifolia/ maculosa (seed)	pale persicaria/redshank	-	1
Solanum nigrum L. (seed)	black nightshade	2	-
Scrub, Hedgerow, Woodland			
Sambucus nigra L. (seed)	elderberry	1	-
Dried Waterlogged Plant Remains -Miscellaneous			
Unidentified root/rhizome fragments		++++	+++++
Artefacts			
Spherical hammerscale		-	1

Key to Estimated Quantities: + =1-10 items, ++ =11-50 items, +++ = 51-150, ++++ = 151-250., +++++ = >

Table 4: Plant macro-remains in Forge F007

Phase		6B-C	6B-C	6B-C	6B-C	6B-C	6B-C	6B-C
Feature		F009	F009	F009	F009	F009	F009	F009
Feature Type		well	well	well	well	well	well	well
Context		5085	5159	5198	5212	5225	5225	5226
Sample Number		7	28	44	29	39	50	40
Sample Details		forth fill = <29+44>	secondary fill	forth fill = <7+29>	forth fill = <44+7>	between 4th +5th fills	fill = <39>	5th fill
Whole earth bulk volume (L.)		70	43	338	140	20	382	706
Flot Volume (ml)		1250	20	80	2000	no flot	1000	30
Percentage sorted		50% (raw counts in brackets)	100%	100%	25% (raw counts in brackets)	100%	100%	100%
Counted Items Per Litre of Sampled Soil		14 (8)	<1	<1	28 (7)	<1	1	<1
Charred Plant Remains - Cereals								
cf. *Avena* sp. (grain)	oat	-	-	-	4 (1)	-	-	-
Hordeum distichon/ vulgare L. (straight hulled grain)	two or six-rowed barley	-	-	3	8 (2)	-	-	1
Hordeum sp. (grain)	indeterminate barley	-	-	-	4 (1)	-	-	-
Hordeum vulgare L. (twisted hulled grain)	six-rowed barley	2 (1)	-	-	-	-	-	-
Secale cereale L (grain)	rye	-	-	-	4 (1)	-	-	-
Triticum aestivum/ spelta L. (grain)	bread wheat/spelta	-	1	-	-	1	-	-
Triticum aestivum/durum/turgidum L.(grain)	bread/club/rivet wheat	-	-	-	28 (7)	-	-	-
Triticum dicoccum L.(grain)	emmer	4 (2)	-	-	8 (2)	-	-	-
Triticum spelta L. (grain)	spelt	-	-	13	20 (5)	-	1	3
Triticum spelta L. (germinated grain)	spelt	-	-	-	4 (1)	-	-	-
Charred Plant Remains - Charcoal								
Alnus glutinosa (L.) Gaertn (wood)	alder	-	-	-	16 (4)	-	-	-
Betula sp.	birch	-	-	-	44 (11)	-	-	-
Corylus avellana L. (roundwood - 5 rings, 10mm diameter)	hazel	-	-	-	8 (2)	-	-	-
Prunus sp.	cherry/plum	-	-	-	16 (4)	-	-	-
Quercus sp.	oak	-	-	-	208 (52)	-	-	18
Charred Plant Remains - Miscellaneous								
Unidentified charcoal flecks <4mm		+++++	++++	+++++	++++	-	++++	+++++
Dried Waterlogged Plant Remains								
Nutrient Rich Waste and Cultivated ground								

	Phase	6B-C	6B-C	6B-C	6B-C	6B-C	6B-C	6B-C
Chenopodium album L.(seed)	fat hen	20 (10)	-	11	4 (1)	-	3	1
Chenopodium album L.(seed fragment)	fat hen	-	-	3	12 (3)	-	-	-
Fumaria officinalis L. (seed fragments)	Fumitory	2 (1)	-	-	-	-	-	-
Hyoscyamus niger L. (seed)	henbane	8 (4)	-	-	20 (5)	-	-	-
Hyoscyamus niger L. (seed fragment)	henbane	-	-	-	8 (2)	-	-	-
Lamium sp. (seed)	dead-nettle	16 (8)	-	-	64 (16)	-	-	1
Papaver sp. (seed)	poppy	-	-	-	24 (6)	-	-	-
Persicaria lapathifolia/ maculosa	pale persicaria/Redshank	16 (8)	-	-	4 (1)	-	-	-
Polygonum aviculare L. (seed)	knotgrass	4 (2)	-	-	-	-	5	-
Polygonum aviculare L. (seed fragments)	knotgrass	-	-	-	-	-	1	-
Potentilla erecta (L.) Rausch	tormentil	8 (4)	-	-	-	-	-	-
Prunella vulgaris L. (seed)	self-heal	-	-	-	8 (2)	-	-	-
Ranunculus acris/repens/bulbosus (seed)	meadow/creeping bulbous buttercup	4 (2)	-	-	28 (7)	-	3	-
Ranunculus acris/repens/bulbosus (seed fragment)	meadow/creeping bulbous buttercup	2 (1)	-	-	-	-	3	-
Ranunculus sardous Crantz (seed)	hairy buttercup	-	-	-	4 (1)	-	1	-
Rumex acetosa/crispus/obtusifolius (seed)	common/curled/broad-leaved dock	48 (24)	-	-	148 (37)	-	13	-
Solanum nigrum L. (seed)	Black nightshade	4 (2)	-	-	20 (5)	-	-	-
Stellaria graminea L. (seed)	lesser stitchwort	2(1)	-	-	-	-	-	-
Stellaria/Cersatium sp. (seed)	stitchwort/mouse-ear	58 (29)	-	-	40 (10)	-	1	-
Urtica dioica L.(seed)	stinging nettle	244 (122)	-	-	1056 (264)	-	44	18
Urtica urens L. (seed)	small nettle	-	-	-	-	-	4	-
Urtica dioica L.(seed fragments)	stinging nettle	-	-	-	-	-	3	-
Verbena officinalis L. (seed)	vervain	4 (2)	-	-	4 (1)	-	2	-
Viola sp. (seed)	violet	4 (2)	-	-	-	-	-	-
Damp Ground								
Carex sp. (seed - trigonous)	sedges	2 (1)	-	6	28 (7)	-	3	-
Carex sp. (seed - lenticular)	sedges	2 (1)	-	1	-	-	9	-
Conium maculatum L. (seed)	hemlock	-	-	-	568 (142)	-	17	-
Conium maculatum L. (seed fragments)	hemlock	48 (24)	-	-	340 (85)	-	13	-
Hypericum sp. (seed)	St. John's wort	-	-	-	4 (1)	-	-	-
Lycopus europaeus L. (seed)	gypsy-wort	28 (14)	-	-	60 (15)	-	136	-
Schoenoplectus sp. (seed)	club-rush	2 (1)	-	-	-	-	-	-
Mentha cf. *aquatica* (seed)	water mint	-	-	-	4 (1)	-	-	-
Scrub, Hedgerow, Woodland								
Prunus spinosa L. (fruit endocarp fragment)	sloe/blackthorn	-	-	-	-	1	-	-
Alnus glutinosa (L.) Gaertn (seed)	alder	-	-	-	4 (1)	-	-	-

		Phase	6B-C	6B-C	6B-C	6B-C	6B-C	6B-C	6B-C
Corylus avellana L. (fruit 'nut')	hazel		6 (3)	-	-	-	-	1	7
Corylus avellana L. (fruit 'nutshell frgaments')	hazel		42 (21)	-	1	-	-	12	58
cf. *Prunus spinosa* L. (fruit endocarp fragment)	sloe/blackthorn		-	-	-	-	-	1	-
Prunus domestica L. (seed))	wild plum		-	-	-	-	-	1	-
Rubus fruticosus L.agg. (seed fragment)	blackberry		2 (1)	-	-	16 (4)	-	1	-
Rubus fruticosus L.agg. (seed)	blackberry		2 (1)	-	-	8 (2)	-	-	-
Sambucus nigra L. (fruit endocarp fragment)	elderberry		60 (30)	-	1	300 (75)	-	4	9
Sambucus nigra L. (seed))	elderberry		132 (66)	-	-	564 (141)	-	18	-
Dried Waterlogged Plant Remains -Miscellaneous									
Alnus/Betula sp.	alder/birch		-		-	-	-	1	-
cf. *Alnus/Betula* sp. fragment from small selection	alder/birch twig 5mm , no clear growth rings		-		-	1	-	-	-
cf. *Prunus* sp.	cherry/plum		-		-	-	-	-	2
Prunus sp/Betulaceae	cherry/plum/birch family		-		-	-	-	-	1
Quercus sp.	oak		-		1	-	-	1	-
Quercus/Fraxinus sp,	oak/ash		-		-	-	-	-	1
cf. *Quercus/ Fraxinus* sp.	oak/ash		-		3	1	-	-	-
Quercus sp. wood fragment from small selection	oak		-		-	1	-	-	-
Unidentified deteriorated wood fragments			++++	-	++++	++++	++	++++	+++
Indeterminate stem/leaf fragments			+++	-	+++	++	+++	++++	+++
Unidentified root/rhizome fragments			-	++++	-	+	-	++++	-
Fauna									
Earthworm cocoons			-	-	-	+	-	++	-
Beetle fragment			+	-	-	-	-	+	+
uncharred bone fragment			+	-	-	-	-	-	+
Artefacts									
Flake hammerscale			-	2	-	-	-	-	-

Key to Estimated Quantities: + =1-10 items, ++ =11-50 items, +++ = 51-150, ++++ = 151-250., +++++ = >

Table 5: Well F009 – archaeobotanical remains

Phase		**6B-C**
Feature		**F010**
Feature Type		**pit**
Context		**5168**
Sample Number		**38**
Sample Details		**third fill = <41>**
Whole earth bulk volume (L.)		**18.5**
Flot Volume (ml)		**not given**
Percentage sorted		**100%**
Counted Items Per Litre of Sampled Soil		**2**
Charred Plant Remains - Charcoal		
Betula sp.	birch	1
Fraxinus excelsior L.	ash	1
Prunus sp.	cherry/plum	1
Quercus sp.	oak	27
Dried Waterlogged Plant Remains -Miscellaneous		
Unidentified deteriorated wood fragments		+

Key to Estimated Quantities: + =1-10 items

Table 6: Pit F010 – archaeobotanical remains

Lisa Gray

www.themolluscs.com

9 May 2018

16.12.1 Assessment of the Geoarchaeology at Bridge Farm, Barcombe, East Sussex by Dr Michael Allen (2013)

Extract from AEA 090: Barcombe - Culver Geoarchaeology

Introduction

Following the work at Barcombe Church Field, Culver Farm and The Wilderness (e.g. Allen 2009; 2010a; 2010b; 2011; 2013) it is clear that the Ouse valley floodplain has a complex, but significant hydrological regime of former stream/river courses and waterways that are significant to the archaeology of the area, and have been used and exploited from at least the Bronze Age. They were particularly significant in relation to Roman activity at Barcombe villa, Barcombe bath-house and Culver. Further, there is evidence of significant Holocene alluviation (10-12m in the Ouse valley) of which 6-8m are Neolithic and later. Limited exploration also indicates the presence of packets or blankets of Roman and post-Roman overbank floodplain alluvium which may mask, seal, bury and contain Roman (and earlier) archaeological evidence.

As a result of geoarchaeological investigations carried out at Barcombe villa/bath-house environs, Culver Farm and the Wilderness Culver (principally Feb 2009-July 2012), a basic concept of some of the Bronze Age and Roman fluvial pathways have been defined, and access by boat along at least two of these courses and the presence of a harbour has been postulated. This work now provides the opportunity of examining the use valley at a slightly larger scale, especially concentrating on meander cores, potential valleys, the upper overbank floodplain sequence (but see below), and the presence of regionally important prehistoric waterlogged wood and peat sequences (Allen 2011). The definition of former course of the Ouse cannot, however, be detected by geoarchaeological methods.

The Ouse Valley

Palaeo-geography

The Ouse valley, like the Adur, Arun, Cuckmere and Rother are deeply incised valleys with metres of Holocene alluvium (Robinson & Williams 1983, 53-4; Scaife & Burrin 1992). It has long been known that appreciable sequences of Holocene alluvium occur in the Ouse valley (Burrin 1985; Burrin & Jones 1991; Burrin & Scaife 1988; 1994; Waller & Hamilton 1998), with important seminal reports by Jones and by Thorley as early as 1971(Jones 1971; Thorley 1971; 1981). Not only do these indicate long and deep alluvial sequences with long stratified pollen sequences (Thorley 1971; 1981; Scaife & Burrin 1983; 1985; Waller & Hamilton 1988; 2000), but some show the presence of cereal pollen at depths in excess of 8m (Wing 1980; Brooks unpubl: Drewett *et al.* 1988). More significantly those at Sharpsbridge (Scaife & Burrin 1983,) are less than 8km north of the Barcombe area, while that at Caburn (Waller & Hamilton 1998; 2000) is a few kilometres away. The most significant are those at Wellingham as they have Neolithic cereal pollen at depths of 6- 8m and are on the edge of the Barcombe-Culver study area, and immediately adjacent to the new Bridge Farm site.

The recent work (Allen 2009-13) combined with the analysis of Scaife & Burrin, and those of Wing in the Ouse Valley provide a sound basis for examining the broader setting, and more detailed palaeo-environmental and geoarchaeological studies. It is clear that the vegetation history of the later Holocene periods (Later Bronze Age onwards) has not been examined in detail, and that recent work at Barcombe and The Wilderness has demonstrated the

significance and importance of alluvial corridors within the Ouse floodplain for both transport but also as reservoirs of palaeo-environmental information.

Buried archaeology

The nature of these streams which cross the Ouse floodplain travel over much deeper alluvial stratigraphy (8-12m), and the relationship of the two has not been defined. Augering and testpitting south of this area (in the Hamsey environs) has shown the potential for Medieval levels to be buried by up to 0.65m of alluvium and Roman-British levels by up to 1.45m of overbank floodplain alluvium (Allen 1982 and unpubl.).

At The Wilderness, a rare and regionally significant waterlogged Bronze Age site was discovered (Allen 2011), but this was within a channel incised through the Holocene floodplain alluvium.

The Ouse Valley floodplain is defined as containing essentially 8-12m of largely undifferentiated fine-grained sediments with little or no organics (e.g. Scaife & Burrin 1983). Thus, defining the extent and distribution of the Roman and post Roman floodplain alluvium in the Ouse Valley corridor is a challenging task due the potential appreciable depths, and stiff nature, of the sediments, and the homogeneous and generally undatable nature of this facies. Apart from the practical field problems (physically hard to auger), the definition of any chronology within the fine-grained overbank floodplain alluvium is difficult, if not impossible from augering and test pits, as there are no chrono-stratigraphic markers. However, a combination of augering, voucher profiles, and test pits near evidence of archaeological activity (e.g. Barcombe villa and bath-house and the Culver sites and Bridge Farm), may provide alluvium from which dateable artefacts can be recovered, and stratigraphy then traced by augering.

Defining the original location of the main Ouse channel is a highly complex and probably impossible geoarchaeological conundrum. Hand or mechanical coring to depths of 12m will not find a 'fossilised' channel. As the channel migrates across the floodplain it becomes infilled with fine-grained alluvium - essentially the material in suspension that is deposited during regular small-scale flood events as overbank floodplain alluvium. Only if cut-off channels of Oxbows occur and are infilled with organic rich peats is there any chance of locating and dating former channel courses

It is clearly a much better use of investigative resources to examine the existence, depth and nature of the overbank floodplain alluvium along the Ouse valley and meander core margins. This will have a greater research capital return.

Bridge *Farm*

Alluvial Soils

The meander core at Bridge Farm contains a peleo-alluvilal typical brown earth indicating former Holocene alluviation over the meander core. The archaeological features recorded in the geophysical survey by Staveley, may, therefore, have very positive geophysical responses, but visually may be difficult to detect in the archaeological record until the unbioturbated and unweathered parent material is reached. That is the lower part of the present, relatively deep, soil horizon has formed by *in situ* pedogenesis since prehistoric, Roman and probably early medieval times. This pedogenesis essentially weathers the soft parent material ('natural') incorporating it into, and engulfing it within, the lower part of the soil profile. Thus, the edges of archaeological features are likely to hard to observe in their upper levels, although artefacts and charcoal deposits my belie their presence. Apart from very labour-intensive hand trowelling which may define some, heavy and judicious stripping and removal of, the technically the upper archaeological (and potentially artefacts-bearing) horizons, will truncate the site, but is likely to locate archaeological features where pedogenesis and weathering are less well-defined; i.e. at the B / Rw interface.

Floodplain alluvium

Preliminary work at Bridge Farm has been conducted (2012) and comprises some limited probabilistic hand augering using 5cm diameter dutch augers and 3cm diameter gouge augers with 50cm and 1m long chambers. A stochastic programme of 36 auger points and recorded probably three distinct alluvial facies. One is a massive anthropogenically dumped deposit that looks very similar to the later Holocene alluvium - probably re-deposited alluvium machined in. It cannot be determined by structural characteristics not colour or texture or moisture, but microscope examination of 17 subsamples showed the presence of plastic and orange nylon fibres at depths of over 1.2m.

A second is a later Holocene alluvium probably later prehistoric to medieval that might both encapsulate and bury Roman material. It is likely the Roman horizons may be within the alluvium, on the fringes of the meander core. There is the possibility of the colluvial deposits from the core, and alluvial floodplain deposits at footslope locations, and 5 auger points produced fragments of pottery (using the dutch auger) that might be Romano-British. A consistent layer of charcoal was recorded within the alluvium and a consistent depth and this may represent Roman activity. Consequently machine-stripping and mass removal of the deposits is not advised, as Roman levels are likely to be contained within rather than at the base, of the alluvium in these locations.

The third alluvial facies seem to be an earlier Holocene (or older) deposit i.e. early prehistoric or earlier, and possibly Mesolithic to Neolithic in date during rapidly rising sea- level and the flooding of the Ouse valley (Robinson & Williams 1983).

The blanket recording of 'alluvium' is thus, likely to be unhelpful as some is post-Roman, some modern, some just pre-Roman and some much older. The differentiation of these three facies was exceptionally difficult in the field, and would be significantly aided by the hand- excavation and appropriate geoarchaeological recording of pedodological and alluvial structures in pen excavations, rather than just by colour and texture. The presence of gleying in the upper horizons indicates post-depositional effects which are likely to occur, and are commonly mis-recorded by archaeologist as depositional horizons.

Geoarchaeology and palaeo-environmental background

For any site the ideal is an off-site palaeo-environmental history to place the location into the wider landscape and chronological history. Bridge Farm has two pollen cores reported from Wellingham itself (Wing 1980 and Brook undat), which provide just such an overview. Both are now over 30-35 years old, and both concentrated on the late glacial vegetation of pattern or early Holocene woodland succession. Neither concentrated on the late Holocene vegtetaional record, and like Sharpsbridge (Scaife & Burrin 1983), it is recorded but discussed in only a cursory fashion. Nevertheless, the outline record exists and can be evaluated in these three records with those from Caburn (Waller & Hamilton 1998; 2000), and the older studies of sequences from The Brooks (Thorley 1971; 1981) to provide a general picture. The Wellingham sequences, however provide the potential for more detailed and dated sequence covering the Bronze Age to Roman periods, and the research potential clearly exists. Further it has been suggested that some of the pools or mires might represent Oxbows or cut-off lakes, and been the depository for Iron Age and Roman ritual offerings.

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16.12.2 Report on possible Vinianite in Feature 9 by Dr Mike Allen

Rich blue, cemented fine-grained minerogenic deposits were present in the waterlogged pit/well at Bridge Farm and observed on 1/8/2014. The 'azure' blue colour is reminiscent of vivianite, however, this normally forms distinct mottles within waterlogged and phosphate-rich deposits rather than minerogenic concretions. However, it is almost certainly an intensive form of vivianite secondary deposition.

Vivianite ($Fe_3(PO_4)_2$. $8H_2O$), a crystalline iron phosphate (Goldberg & Macphail 2006, 204, 238) or ferruginous phosphate, is common in waterlogged conditions (peat, estuarine sediments) as a secondary mineral formation (Goldberg & Macphail 2006, 47). It is a secondary phosphate common in soils rich in phosphate such as organic, occupation and faecal material.

What does it represent on this site

This is formed *in situ* by the precipitation of iron and phosphate as a crystalline form with a strong azure blue. It occurs in waterlogged deposits and can appear as small nodules of white powdery material, and quickly turns blue on exposure to air (Limbrey 1975, 28). It occurs in wet anaerobic conditions (where the minerals are more 'mobile'), where there is an abundance of organic matter undergoing degradation and releasing phosphate, and where the iorn is in a reduced form. This is therefore typical where occupation, especially faecal, debris accumulate in wet deposits. Hence it has been noted in Roman roadside ditches at Deansway, Worcester and Poultry, London (Goldberg & Macphail 2006, 237-238), and Roman/Saxon floodplain cultivation soils with anthropogenic inclusions (possibly night soils) at Oakley, Suffolk (Goldberg & Macphail 2006, 204-206).

Azutire (copper carbonate hydroxide), to which this has a strong colour affinity, is rare in soils and copper is not a common mineral, whereas iron is one of the most common minerals on the planet and in soils. A rapid scan of soil textbooks shows vivianite in the index of most and azurite in none.

References

Goldberg, P. & Macphail, R.I. 2006. *Practical and Theoretical Geoarchaeology.* Oxford: Blackwell Publishing

Limbrey. S. 1975. *Soil Science and Archaeology.* London: Academic Press.