

1.1 Ceramic Building Materials

by Susan Pringle

Introduction

- 1.1.1 Some 6.88 kg of ceramic building material was recovered during the watching brief at Bower Road.
- 1.1.2 The material was collected in accordance with the Landscape Zone Priorities and Fieldwork Event Aims for the project, which are set out in section 2 of the main report above. The material was recovered in order to provide evidence for the date and nature of occupation at the site, particularly at the late Iron Age/Roman transition, and to provide data relating to economic indicators at this time.

Methodology

- 1.1.3 The assemblage is small, and it was therefore decided to carry out a rapid assessment of it all. The material has been scanned for the assessment using a binocular microscope. Ceramic building material has been divided by form, and the fragments counted and weighed. The presence of distinctive fabric types has been noted, but no analytical work has been carried out on the fabrics from the site, as this task is more appropriately carried out at the next stage. Other information recorded includes the presence of combing, tally or signature marks, the presence or absence of glaze, and any complete dimensions. The data were entered on an Excel database.

Quantification

- 1.1.4 The total weight of ceramic building material scanned for the assessment is 6.880 kg. Fragment counts and weights by context are listed in table 1.7.

Roman building material

- 1.1.5 The Roman tile assemblage is small, with only 2.58 kg of securely identified tile. Types represented are brick, roof tile (tegula and imbrex) and box flue tile. The counts and weights for each Roman tile type are shown in table 1.5. The relatively small quantities of imbrex, compared to tegula, suggest that the assemblage does not represent primary destruction deposits of roofing tile, which might be expected in the vicinity of a villa, but is more likely to be material, possibly reused, which has been selected for purposes to do with agricultural or industrial use of the land. No complete tiles, or complete dimensions, were noted.
- 1.1.6 Although detailed fabric work has not been carried out on the material from Bower Road, the following distinctive fabrics were noted:
1. A hard, red fabric with some inclusions of medium quartz sand, and medium moulding sand. This is similar to the most abundant tile fabric from London (MoL fabric group 2815, including fabric 2452), much of which was probably produced at kilns in the Brockley Hill area on Watling Street to the north of London.
 2. A fairly soft, fine, orange fabric, with fine moulding sand; probably a Kentish variant of the London clay fabric group 2815.
 3. A yellowish-white or pale orange, clean fabric with moderate inclusions of colourless or rose quartz, similar to MoL fabric 2454 and CAT fabric 8. This is identical to tiles produced at the tile kiln at the Eccles villa north of Maidstone.

4. Red-firing clay marbled with silty streaks, sparse medium quartz sand, and rounded very coarse inclusions of paler silt/clay and dark red siltstone (< c.3mm); well-fired; some streaks are reduced to a bright grey. Fabric A.

5. A light orange fabric with common quartz sand and frequent red and cream clay inclusions, similar to MoL fabric 3238.

6. A range of orange-brown fabrics, with varying amounts of quartz and iron-rich inclusions; some have cream silt, calcareous clay or white calcareous inclusions. This group contains fabrics resembling MoL types 3018, 3028 and 3662.

Post-Roman building material

- 1.1.7 Post-Roman material from the site consists of up to four fragments, weighing 0.05 kg. The count and weight are shown in table 1.6. Three of the fragments are too small and abraded to be positively identified, but they are probably all peg or plain tile. The fabrics vary; the only certain example is in the fine, hard, pale orange, calcareous fabric common to north-east Kent (near MoL fabric 3201), but other fabrics are possibly present. None is glazed, nor were any complete tiles, or complete dimensions, noted. Dating of this tile type is difficult, as peg tiles have changed little since the 12th or 13th century, but the quantity of material is too small to be of significance.

Provenance

- 1.1.8 The provenance of the tile is set out in Table 1.7. To summarise, Roman tile comes from groups 169, 173, 178 and 180 (Phase 2); 171, 181, 182 and 550 (Phase 3), and medieval or post-medieval tile from group 170.

Conservation

- 1.1.9 Further analysis may be needed of the ceramic building material fabrics, and it should not be placed in long term storage until this has been ascertained.
- 1.1.10 There are no special requirements for long term storage, other than the use of robust packaging materials and a dry environment.
- 1.1.11 Retention/discard policy: at this stage, all the material should be retained pending final decisions about the scope of the CTRL post-excavation programme. In the future, if the tile is fully recorded and quantified by fabric and form, the majority can be discarded. The following should be retained: samples of all the fabrics; tiles with distinctive markings, such as combing, tally marks, signature marks or stamps; the quantity retained will probably be equivalent to between 10% and 20% of the assemblage.

Comparative material

- 1.1.12 The tile fabrics found on the site should be compared with the Canterbury Archaeological Trust's tile fabric type series, which could provide information on their sources and date ranges, and comparisons could be carried out with material from other Roman sites in north-east Kent. Some of the fabrics are similar to those used in London, which suggests that they have been transported some distance from their place of manufacture.

Potential for further work

- 1.1.13 The following section discusses potential for further work in the light of the Landscape Zone Priorities and Fieldwork Event Aims.

- 1.1.14 The tiles provide evidence for the sources and types of building materials used on or near the site in the Roman period. In terms of the CTRL research priorities, this is chiefly of interest as an economic indicator of trading patterns and sources of supply in the region during the Roman period. In this respect, there is some scope for comparative work with ceramic building material assemblages from other CTRL sites such as Thurnham Villa, although for the most part these have been small.
- 1.1.15 Limited further analysis of the distribution of ceramic building material and fired clay (see Appendix 1.3) in conjunction with stratigraphic data may reveal further information about the nature of structures on the site, and their status and economic function.

Recommended future work:

The following work should be undertaken in order to produce a publication report.

Task 1: Comparison of the fabrics with those in the Canterbury Archaeological Trust and Museum of London type series, and describe fabrics

Task 2: Quantify ceramic building material (sort material by fabric and form and count and weigh each group; computerise data). The assessment data will be used as far as possible, but the groups will need proper quantification. Select material for illustration

Task 3: Combine stratigraphic data with ceramic building materials and fired clay data, and analyse their use on the site.

Task 4: Write publication report – probably for incorporation into the main body of the publication text.

1.2 Fired clay

Introduction

- 1.2.1 A very small quantity of fired clay was recovered during the watching brief, in total 0.818 kg. The material was recovered in accordance with the Landscape Zone Priorities and Fieldwork Event Aims for the CTRL project, which are set out in section 2 of the main document, above. The material was collected in order to provide data relating to change at the Iron Age/Roman transition, and in order to illuminate economic activity at the site.

Methodology

- 1.2.2 As the assemblage is so small, it has been counted and weighed in its entirety, and the presence of features such as original surfaces, impressions or tempering has been noted.

Quantification

- 1.2.3 The fired clay assemblage consists of 204 small fragments with a total weight of 0.818 kg. Most of the fragments, which have an average weight of *c* 8 g, are too small and abraded to provide much information about their use. The fragment counts and weights are listed in table 1.8.

- 1.2.4 Fabric analysis has not been carried out, but the majority of the fired clay is fine-textured and orange, sometimes firing to cream or brown. The most common inclusion is quartz sand, although it is not possible to state whether this has been added or is naturally occurring in the clay beds. A few fragments contain fairly fine organic material, and it is thought that they might represent the very abraded remains of fired clay artefacts, such as loomweights (contexts 300, 304, 381, 470, 489); if so they are probably pre-/Roman in date. Few other impressions were noted, and although some of the material is reduced, there is nothing that strongly suggests the presence of debris from oven linings or kiln structures. One fragment contains shell; this may be a poorly fired pottery fabric (context 466). Mortar was noted on some pieces, which is suggestive of a Roman or post-Roman date (contexts 152, 469, 484, 564); the material in context 564 resembles a sandy mortar, and may be a mixture of clay, sand and lime used to render the surface of a wall. This is of particular interest since it is associated with context group 187, a structural beamslot on the south side of the posthole building.

Provenance

- 1.2.5 The fired clay appears to come from a range of features across the site, most of them probably of Roman date. The provenance of the fired clay is set out in table 1.8. It may be significant that the clay with organic inclusions, possibly abraded artefactual material, clusters in early to mid Roman ditch groups 169 and 173 (with the exception of a fragment found in ploughsoil).

Conservation

- 1.2.6 Further analysis may be needed of the fired clay fragments which may represent artefacts, and it should not be placed in long term storage until this has been ascertained.
- 1.2.7 The condition of the material is fairly abraded, but there is no risk to its preservation. There are no special requirements for long term storage, other than the use of robust packaging materials and a dry environment.

Comparative material

- 1.2.8 The fired clay assemblage has no potential for comparative study.

Potential for further work

- 1.2.9 The fired clay and daub has little potential for further study in pursuit of the CTRL research aims, but the presence of possible loomweights suggests that there may have been occupation, probably of a domestic nature, on or near the site. The presence of possible mortar in a feature related to the posthole building is of interest in terms of understanding the nature and form of this structure. Although there is no scope for further study of this assemblage, it has value as a possible indicator of building superstructure and of economic activity and would merit inclusion in any proposed report.

Table 1.5: Counts and weights for each Roman tile type (securely identified material only)

Tile type	Count	Weight (g)
Brick	18	3750
Tegula	18	1775
Imbrex	1	30
Flue tile	3	340
Tile	32	620
<i>Total</i>	72	6515

Table 1.6: Post-Roman material by count and weight

Context	Count	Weight (gm)	Type	Comments
53	1	20	peg tile	Calc fabric nr 3201, but slightly siltier, with sparse coarse moulding sand
457	2	20	peg?	Nr 2587, but more frequent iron-rich incls, and higher fired, reduced areas in matrix
458	1	10	peg?	Red fabric, slightly sandy - could be pot??
<i>Total</i>	4	50		

Table 1.7: Building materials from Bower Road ARC 440/99 95+900-96+300

Context	Count	Weight (gm)	Type	Period	Early date	Late date	Comments	Type of context
53	1	20	peg	MD; PM	AD 1050	1900	Calc fabric nr 3201, but slightly siltier, with sparse coarse moulding sand.	
102	1	370	brick	RO	AD43	400	Fabric A; white clay streaks present, similar fabric 3200.	Fill of waterhole 372
102	1	25	tile	RO	AD43	400	2815 - soft, orange and micaceous.	Fill of waterhole 372
102	2	10	f/c	?			Orange with fine black specks x 1; sandy lt orange-brown x 1; both abraded.	Fill of waterhole 372
103	1	50	tegula	RO	AD43	400	2815	Fill of waterhole 372
103	2	25	tile	RO	AD43	400	Fabric A x 1; orange with silt & iron incls, v.fine qtz x 1	Fill of waterhole 372
120	1	60	brick	RO	AD43	400	sandy - 3004 nr 3028?	
141	2	420	tegula	RO	AD43	400	Conjoin; fab nr 3238, but iron-rich.	Fill of ditch 140
141	1	20	tile	RO	AD43	400	Orange version of 2454.	Fill of ditch 140
152	9	55	f/c	?			Fine, light orange clay x 7; lt brown with coarse sand x 2 (1 with mortar attached or mixed in).	
214	1	40	tile	RO	AD43	400	Fabric A - brick or	

Context	Count	Weight (gm)	Type	Period	Early date	Late date	Comments	Type of context
							tegulaula.	
215	3	10	f/c	?			Fine orange x 2; sandy x 1	
231	1	10	tile	?			Sandy orange, nr 2815.	
239	1	50	tegula	RO	AD43	400	Orange silty, irony, blocky fabric nr 3226.	
239	2	10	tile	?			Fabric A - scraps.	
243	1	100	tegula	RO	AD43	400	Fine sandy, iron-rich, brownish-red ?silty lumps, reduced core.	Upper fill of pit 242
243	1	10	f/c	?			Sandy lt brown daub - abraded.	Upper fill of pit 242
245	1	35	tile	RO	AD43	400	Fabric A, tegula or brick.	Group 170, primary fill of ditch 249
246	1	5	tile?	?			Prob abraded cbm, fabric nr 3238.	Group 170, upper fill of ditch cut 249
250	1	10	f/c	?			Very sandy fired clay or daub, abraded surfaces.	Lower fill of pit 242
250	1	20	tile	RO	AD43	400	Flat form, ?tegula or ?brick. Orange, fine sandy, some silt, nr 3238.	Lower fill of pit 242
250	1	15	tile?	?			Sandy iron-rich brown fabric, either tile or very hard daub. I flat surface.	Lower fill of pit 242
260	1	5	tile	RO	AD43	400	2815 - abraded brick or tegulaula	Group 178, upper fill of ditch cut 258
262	1	5	f/c	?			sandy daub?	
267	4	1300	brick	RO	AD43	400	2815 and fabric A.	
293	1	3	f/c	?			Pale orange and cream, fine textured, abraded.	Group 180, fill of ditch (=287)
293	1	5	tile?	?			Orange, very sandy; decayed tile or daub. Abraded.	Group 180, fill of ditch (=287)
294	2	20	tile	RO	AD43	400	Nr 3238, no surfaces.	Group 180, fill of ditch (=288)
300	5	25	f/c	?			Some fine, some sandy, 1 with organics.	
301	3	20	f/c	?			Abraded sandy fabric.	
304	14	135	f/c	?			Orange brown clay or daub, mixed with organics - dung? 2 have smoothed flattish surfces.	
305	3	10	tile?	?			Tile or v hard f/c; mixed red and white clays, and coarse dk rose qtz.	Group 169, fill of ditch
306	1	10	tile?	?			Tile or v hard f/c; mixed red and white clays, and coarse dk	Group 170, fill of ditch

Context	Count	Weight (gm)	Type	Period	Early date	Late date	Comments	Type of context
							rose qtz.	
367	3	240	brick	RO	AD43	400	2815, fine sandy orange.	Group 169, upper fill of ditch 368
367	2	110	tile	RO	AD43	400	1 is prob brick.	Group 169, upper fill of ditch 368
367	10	30	f/c	?			Fine, lt orange clay; 1 or 2 frags are smoothed.	Group 169, upper fill of ditch 368
371	1	100	brick	RO	AD43	400	Fabric A, 36mm thick.	Group 180, upper fill of ditch 370
371	1	45	tegula	RO	AD43	400	2815 fabric nr 2459; sooted.	Group 180, upper fill of ditch 370
371	7	90	tile	RO	AD43	400	2815, and fine orange sandy version of 2815; fabric A nr 3019 x 4; all scraps.	Group 180, upper fill of ditch 370
371	1	20	tegula	RO	AD43	400	2815	Group 180, upper fill of ditch 370
381	3	255	brick	RO	AD43	400	Misc fabrics, all orange with silt and iron incls.	Subsoil
381	1	5	tile	?				Subsoil
381	1	10	f/c	?			Lt brown, lot of fine sand & some organics - daub or clay? Burnt black.	Subsoil
383	3	2	f/c	?			Crumbs of sandy orange clay	
386	2	10	f/c	?			Streaked red and white clays, v.coarse dk rose qtz.	
416	1	20	f/c	?			Fine lt orange clay (part reduced) - a groove could be a wattle mark, but uncertain.	
435	2	20	f/c	?			Fine very sandy clay - light orange.	
441	1	5	f/c	?			Fine very sandy clay - light orange.	
455	1	5	tile	?			2815 orange type	
457	2	20	peg?	MD; PM	AD10 50	1900	Nr 2587, but more frequent iron-rich incls, and higher fired, reduced areas in matrix.	Fill of linear ditch 456
458	1	10	peg?	MD; PM	AD10 50	1900	Red fabric, slightly sandy - could be pot??	
462	5	635	tegula	RO	AD43	400	Nr 3662, less sandy version	Group 171, fill of ditch 461
462	1	30	imbre x	RO	AD43	400	Nr 3662, less sandy version	Group 171, fill of ditch 461
462	1	5	tile	RO	AD43	400	Nr 3662, less sandy version	Group 171, fill of ditch

Context	Count	Weight (gm)	Type	Period	Early date	Late date	Comments	Type of context
								461
462	6	20	f/c	?			Very sandy lt brown clay - abraded.	Group 171, fill of ditch 461
466	1	5	f/c?	?			Orange surface, black core - contains shell so may be pottery.	
469	6	15	f/c	RO ?			Crumbs, some look mortared.	
470	18	25	f/c	?			v fine lt orange clay x 4; brown with organics x 14.	
471	27	25	f/c	?			Various fabrics - all tiny scraps.	Group 173, fill of ditch 468
471	2	10	tile?	?			Conjoin. Very burnt tile?	Group 173, fill of ditch 468
484	4	25	f/c	?			Very sandy lt brown; abraded, 1 ?mortared.	
487	1	20	brick	RO	AD43	400	Chip; red fabric nr 3028.	Group 169, fill of ditch 486
487	7	20	f/c	?			Mostly pale pinkish-mauve calcareous clay; 1 or 2 could be scraps of object.	Group 169, fill of ditch 486
487	1	35	tile	RO	AD43	400	3238	Group 169, fill of ditch 486
487	1	5	tile	RO	AD43	400	V abraded, fabric nr 3018.	Group 169, fill of ditch 486
488	26	65	f/c	?			Small scraps, orange fine or sandy.	
489	10	25	f/c	?			Orange fine clay abraded; 1 with organics could be small part object??	
504	2	25	tile	RO	AD43	400	Nr 3238 flake x 1; sandy orange iron-rich x 1.	Group 181, fill of ditch 503
506	1	215	brick	RO	AD43	400	37mm thick.	Group 182, fill of ditch 505
508	4	15	f/c	?			3 small abraded; 1 has surfaces ?form.	
510	1	10	tile	RO	AD43	400	2815, v.abraded.	Group 171, fill of ditch 509
515	4	10	f/c	?			Abraded crumbs.	
549	1	340	brick	RO	AD43	400	Fabric 2454; 50mm thick. Part small clay blob on top surface - accident or tmam?	Group 175, fill of ditch 340
549	3	125	tegula	RO	AD43	400	Fabrics 2815 (incl finer sandy version) and ?3238.	Group 175, fill of ditch 340

Context	Count	Weight (gm)	Type	Period	Early date	Late date	Comments	Type of context
564	13	45	f/c?	?			Abraded brown sandy bits - some look nr mortar - natural calc clay or daub/cob??	
585	1	80	tile	RO	AD43	400	Fine sandy orange-red fabric; brick or tegula, abraded.	Group 550, fill of post-hole 517
645	1	1	f/c	?			Crumb of fine, sandy orange clay.	
695	6	75	f/c?	?			2 conjoin; fine, hard-fired clay or rather soft tile, abraded.	Group 742, fill of ditch 696
695	1	10	tile?	RO	AD43	400	Lt orange fabric, frequent v coarse red iron-rich incls and sparse v.coarse qtz.	Group 742, fill of ditch 696
707	3	340	flue	RO	AD43	400	Fabric 2452, knife-scored lattice keying; 1 plain face.	
707	1	770	brick	RO	AD43	400	3238 & Fabric A, 1 nr fabric A	
707	2	200	tegula	RO	AD43	400	Fine orange sandy.	
707	1	80	brick	RO	AD43	400	Fine orange sandy.	
707	1	40	tile	RO	AD43	400	Conjoin; 3238, flake from tegula or brick.	
717	6	5	f/c	?			Tiny crumbs	
888	2	120	?	?			Clay with iron deposit??	Fill of ditch 887
889	4	60	f/c	?			V.sandy x 1; iron rich sandy x 2; fine clay with surfaces x 1 - all abraded.	
891	1	2	f/c	?			Fine clay; v. abraded.	Primary fill of pit 886
891	2	130	tile?	RO ?			Sandy iron-rich fabric - very poorly fired and abraded brick?	Primary fill of pit 886
891	1	130	tegula	RO	AD43	400	3238	Primary fill of pit 886

Table 1.8: Fired Clay from Bower Road ARC 440/99 95+900-96+300

Context	Count	Weight (gm)	Type	Period	Comment	Type of context
102	2	10	f/c		Orange with fine black specks x 1; sandy lt orange-brown x 1; both abraded.	Fill of waterhole 372
152	9	55	f/c		Fine, light orange clay x 7; lt brown with coarse sand x 2 (1 with mortar attached or mixed in).	Fill of beam slot 151
215	3	10	f/c		Fine orange x 2; sandy x 1	Upper fill of waterhole 372
243	1	10	f/c		Sandy lt brown daub - abraded.	Upper fill of pit 242

Context	Count	Weight (gm)	Type	Period	Comment	Type of context
250	1	10	f/c		Very sandy fired clay or daub, abraded surfaces.	Lower fill of pit 242
262	1	5	f/c		sandy daub?	Group 179, only fill of gully 261
293	1	3	f/c		Pale orange and cream, fine textured, abraded.	Group 180, fill of ditch (=287)
300	5	25	f/c		Some fine, some sandy, 1 with organics.	Group 169, fill of ditch 321
301	3	20	f/c		Abraded sandy fabric.	Group 169, fill of ditch 321
304	14	135	f/c		Orange brown clay or daub, mixed with organics - dung? 2 have smoothed flattish surfaces.	Group 169, fill of ditch
367	10	30	f/c		Fine, lt orange clay; 1 or 2 frags are smoothed.	Group 169, upper fill of ditch 368
381	1	10	f/c		Lt brown, lot of fine sand & some organics - daub or clay? Burnt black.	Subsoil
383	3	2	f/c		Crumbs of sandy orange clay	Group 173, upper fill
386	2	10	f/c		Streaked red and white clays, v.coarse dk rose qtz.	Group 176, fill
416	1	20	f/c		Fine lt orange clay (part reduced) - a groove could be a wattle mark, but uncertain.	
435	2	20	f/c		Fine very sandy clay - light orange.	Tree throw/animal burrow
441	1	5	f/c		Fine very sandy clay - light orange.	Group 171, fill of ditch
462	6	20	f/c		Very sandy lt brown clay - abraded.	Group 171, fill of ditch 461
466	1	5	f/c?		Orange surface, black core - contains shell so may be pottery.	Group 171, fill of ditch 465
469	6	15	f/c		Crumbs, some look mortared.	Group 173, fill of ditch 468
470	18	25	f/c		v fine lt orange clay x 4; brown with organics x 14.	Group 173, fill of ditch 468
471	27	25	f/c		Various fabrics - all tiny scraps.	Group 173, fill of ditch 468
484	4	25	f/c		Very sandy lt brown; abraded, 1 ?mortared.	Group 172, fill of ditch 483
487	7	20	f/c		Mostly pale pinkish-mauve calcareous clay; 1 or 2 could be scraps of object.	Group 169, fill of ditch 486
488	26	65	f/c		Small scraps, orange fine or sandy.	Group 169, fill of ditch 486
489	10	25	f/c		Orange fine clay abraded; 1 with organics could be small part object??	Group 169, fill of ditch 486
508	4	15	f/c		3 small abraded; 1 has surfaces ?form.	Group 171, fill of ditch 507
515	4	10	f/c		Abraded crumbs.	Group 171, fill of ditch 507
564	13	45	f/c?		Abraded brown sandy bits - some look nr mortar - natural calc clay or daub/cob??	Group 187, fill of ditch 433
645	1	1	f/c		Crumb of fine, sandy orange clay.	
695	6	75	f/c?		2 conjoin; fine, hard-fired clay or rather soft tile, abraded.	Fill of ditch 696

Context	Count	Weight (gm)	Type	Period	Comment	Type of context
717	6	5	f/c		Tiny crumbs	Group 176, fill of ditch 716
889	4	60	f/c		V.sandy x 1; iron rich sandy x 2; fine clay with surfaces x 1 - all abraded.	Latest fill of pit 886
891	1	2	f/c		Fine clay; v. abraded.	Primary fill of pit 886