

Assessment of the Fired Clay and Ceramic Building Material from the Ashby Folville to Thurcaston Pipeline (AFT04)

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A collection of fired clay and ceramic building material recovered during fieldwork on the line of the Acton Folville to Thurcaston pipeline was submitted to the authors for identification and assessment.

The finds come from fieldwalking and from excavated features on eight excavated sites (Table 1). The fired clay includes possible fragments of loom weights, of Iron Age or early Roman date together with fragments of daub from wattle and daub structures and the ceramic building material includes Roman roof and building tiles and a single fragment of box flue tile, which must have come from a structure with a hypocaust.

No definite fragments of medieval date were found whilst the fieldwalking produced fragments of post-medieval and later brick, tile and field drain.

Table 1

Site No.	CBM	FCLAY	Grand Total
Fieldwalking	16		16
Site 2	1		1
Site 4	38		38
Site 5	72	5	77
Site 9	4		4
Site 10	2		2
Site 12	2	17	19
Site 13		3	3
Site 15	1		1

Description

One hundred and sixty one fragments were examined and divided into ceramic building material (i.e. fired before used) and fired clay (i.e. accidentally fired, during/after use). In total, 193 fragments were recorded, representing no more than 164 objects and weighing 14.384 Kg (Table 2).

Table 2

Class	Sum of Nosh	Sum of NoV	Sum of Weight
CBM	166	139	14183
FCLAY	27	25	201
Grand Total	193	164	14384

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<http://www.postex.demon.co.uk/index.html>

A copy of this report is archived online at
<http://www.avac.uklinux/potcat/pdfs/avac2005000.pdf>

Ceramic Building Material

Fabric

The ceramic building material was divided into fabric groups (Table 3), based on a visual comparison of the fabrics. Samples of each fabric type were then examined at x20 magnification. The description of these fabrics is given in Table 4 and samples of each fabric have been selected as a fabric series, which is part of the archive.

Table 3

subfabric	Sum of Nosh	Sum of NoV	Sum of Weight
TOO SMALL TO ID	11	11	27
FAB1	36	25	3727
FAB2	30	27	4712
FAB3	58	45	2596
FAB4	1	1	21
FAB5	10	10	667
FAB6	10	10	1322
FAB7	5	5	181
FAB8	2	2	342
FAB9	3	3	588
FAB10	1	1	9
	193	164	14384

The characteristics of the ten fabrics suggests that they were made from several different clays although the tempering material, where present is almost always a rounded quartzose sand containing mostly matt-surfaced quartz grains derived from Triassic sandstones. Fabrics 8 and 9 contain lenses of light-firing clay and have a clay groundmass which at x20 magnification contains no visible inclusions. This suggests that they clay comes from the Jurassic, probably the clays immediately before the Northampton sands, which were deposited in deltaic conditions. All five examples were probably of Roman date and imported to the area. The remaining fabrics mostly seem to have been made from exposures of Mercian Mudstone, or till derived from the Mercian Mudstone. These could have been made locally and include probable Iron Age, Roman and post-medieval/modern materials.

Table 4

Subfabric	Description
FAB1	Hard. Oxidized. Moderate sub-rounded relict clay (i.e. poorly mixed) with sparse calcareous inclusions (heat-altered and leached) and moderate ill-sorted rounded and subangular quartzose sand. Groundmass is silty and possibly originally calcareous.
FAB2	Soft. Oxidized. Moderate sub-rounded fragments of off-white and pink marl, and red ironstone, up to several mm across. Groundmass is silty, micaceous and possibly originally calcareous (Mercian Mudstone?)
FAB3	Very soft. Oxidized. Moderate rounded quartzose sand. Groundmass is silty and micaceous (Mercian Mudstone?)
FAB4	Soft. Oxidized. Poorly mixed with lenses containing abundant rounded quartzose sand (matt, Triassic origin) and others with sparse quartz. Some light-coloured

	lenses may be calcareous. Groundmass is silty and micaceous (Mercian Mudstone?). Finer version of FAB2?
FAB5	Soft. Oxidized. Abundant rounded pellets of marl, several mm across, in a pink calcareous groundmass (Mercian Mudstone?)
FAB6	Hard. Oxidized. Moderate sub-rounded fragments of mudstone (similar in colour and texture to the groundmass). Moderate rounded quartz (matt, Triassic origin) in possibly calcareous groundmass (Mercian Mudstone?).
FAB7	Hard. Oxidized. Abundant angular fragments of white fine-grained sandstone and marl (Triassic?), several mm across. Poorly mixed quartzose sand in groundmass.
FAB8	Hard. Oxidized. Abundant quartz sand less than 0.2mm across. Sparse sandstone fragments containing similar quartz grains in the moulding sand. The groundmass is well-mixed but does contain small lenses of light-firing clay (Jurassic?)
FAB9	Hard. Oxidized. Sparse angular red ironstone fragments. Abundant rounded quartz (matt, Triassic origin). Groundmass contains little quartz and is poorly mixed with lenses of light-firing clay (Jurassic?)
FAB10	Soft, low-fired with dark grey core. Inclusionless groundmass and few visible inclusions. Blocky texture (burnt subsoil?)

In addition to these tiles, a single fragment of a refined whiteware wall tile was recorded. This tile was press-moulded and has a stamp on the underside which read "Made in England". It is of later 19th or 20th-century date.

Form

In most cases it was possible to identify the form of the object (Table 5). On the basis of fabric, dimensions and association it has also been possible to distinguish Roman from later bricks. Unstratified imbrex tiles, however, might be mistaken for fragments of U-shaped field drains, and vice versa, especially since it seems that similar fabrics were used in both periods. One of the two fragments of box flue tile has soot blackening on the inside, confirmation of its use as a channel for taking hot air through the walls of a room from the hypocaust below. Both are decorated with finger-applied grooves.

Table 5

Form	Sum of Nosh	Sum of NoV	Sum of Weight
	41	38	349
?	2	2	53
BOX	2	2	243
BRICK (Roman)	32	30	6246
BRICK (Post-Med/Modern)	14	14	1380
BRICK (undated)	5	5	105
BRICK?	13	5	350
FLAT	2	2	56
IMBREX	16	12	1015
IMBREX?	6	4	689

LAND DRAIN	2	2	330
TEG	20	12	2202
TEG/BRICK	3	3	235
TEG/IMBREX	1	1	53
TEG?	6	6	875
WALT	1	1	2
Grand Total	166	139	14183

Fired Clay

Twenty-seven fragments of fired clay were recorded. Six of these were too small to identify either fabric or form. One is a possible fragment of burnt subsoil (FAB10) and the remainder are fragments of FAB3 (Table 4).

Nine fragments are definitely from a wattle and daub and have wattle impressions. Six others are probably daub but lack the wattle impressions. One fragment has been identified as the top of a horned triangular-shaped loom weight, of Iron Age or early Roman date (54022) and a second piece is tentatively identified as part of a similar weight (54033).

Assessment

Fieldwalking

Sixteen fragments of ceramic building material were recovered from fieldwalking (Table 6). Three fragments were identified as Roman, two bricks and one imbrex tile (a tentative identification. It could be a land drain). The remainder are of post-medieval or modern date.

Table 6

broad date	Form	CS	Plot	Context	Total
ROM+	BRICK	9	83	5508	1
		n/a	n/a	5515	1
PMED	IMBREX?	4	40	40154	1
	BRICK	2	26	5385	1
		3	35	5278	1
		6	59	5136	1
		9	76	3198	1
				83	5509
			n/a	n/a	5011
				5012	1
EMOD	FLAT	2	26	5445	1
	LAND DRAIN	9	76	3061	1
	BRICK	9	76	3062	1
	WALT	3	35	5510	1

Site 2

A single fragment of brick (undated) was recovered from context 14053.

Site 4

Two fragments of post-medieval or later brick and four fragments of undated brick were recovered from context 15001. The remaining material is all of probable or definite Roman date. The finds include brick, used either in walling or as pilae tiles in a hypocaust, tegulae, from roofing, and the two box tile fragments. All are large, fresh fragments and indicate the presence of a Romanised structure on the site. Most of the brick and tile fragments were of local fabrics but four were made from Jurassic clay with light-firing streaks (FAB8 and FAB9).

Table 7

Context	UNID	BOX	BRICK	BRICK?	TEG	TEG?	Grand Total
15001		1	2				3
15032	1						1
15058			1				1
15081	1						1
15084			1				1
15091	1	1					2
15110				1			1
15136	1						1
15151	1						1
15213	1						1
15228	1						1
15255			1		1		2
15258			1				1
15262					1		1
15280			3	1	1	1	6
15342	1						1
15350					1	1	2
15374			2				2
15375			3				3

Site 5

Site 5 produced five fragments of fired clay, from context 10010. They could not be identified as daub and might be accidentally-fired clay. The site also produced a fragment of post-medieval flat roof tile, from context 10083. The remaining finds were all of Roman tile (Table 8). As at Site 4, the collection includes bricks from walling or a hypocaust as well as tegulae

and imbrices. Most of the brick and tile fragments were of local fabrics but one example of FAB8 was present.

Table 8

Context	UNID	BRICK	BRICK?	IMBEX	IMBEX?	TEG	TEG/BRICK	TEG/IMBEX	TEG?
10001		2							
10010	2								
10016		1							
10035				1					1
10061									1
10070	1								
10080			1						
10083	3	3				2			
10085							2		
10087	1		1						
10089		1							
10100	1			1					
10107	1								
10127	1			1		1			
10134	1	2		1		1			
10193		2							
10200	1								
10202		1							
10221	1			1					
10224			1	1					1
10244	2			3	1	1			
10245	1	1		1		1	1		
10246	5					1			
10300				1					1
10307		1							
10308				1					
10309		1							
10316	3	1							
Grand Total	24	16	3	12	1	7	3	1	3

Site 9

Four fragments of ceramic building material were recovered from Site 9. Two were identified as being of post-medieval date (40161 and 40022). The other two fragments are probably of Roman date, consisting of a tegula and an imbrex fragment from context 40151.

Site 10

Two fragments of Roman ceramic building material were recovered from Site 10. One, from 40154 is a possible imbrex fragment and the other, from context 48179, cannot be identified to form.

Site 12

Two fragments of undated ceramic building material were recovered from Site 12. One, from context 54091, is from a brick and the other, from 65055, is too small to identify.

The remaining material from the site is fired clay, all in FAB3 (Table 9). The material includes definite daub and loom weight fragments.

Table 9

Context	UNID	DAUB	DAUB?	LOOM WEIGHT	LOOMWEIGHT?
54002	1				
54012	1				
54019		1			
54022	1	4		1	
54033		4			1
54045			2		
54079			1		

Site 13

Two fragments of daub were recorded from Site 13, from context 095.

Site 15

A fragment of brick of post-medieval date was recorded from Site 15, context 010.

Retention

Post-medieval and later material from fieldwalking can probably be discarded. The Iron Age and Roman finds should be retained, as should post-medieval material from stratified contexts.

Further Work

It would be probably be possible to identify the source of the various fabrics more closely through the use of thin section and chemical analysis. The loomweight fragments are not complete enough for illustration and the remaining finds are of well-known forms which do not require illustration.

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CS-Plot	Context	REFNO	class	cname	subfabric	Form	Description	Nosh	NoV	Weight
10-94	003	003	CBM	PMTIL	FAB1	LAND DRAIN		1	1	28
10-90	006	006	CBM	PMTIL	FAB7	BRICK		1	1	65
10-89	010	010	CBM	PMTIL	FAB7	BRICK		1	1	71
7-68	095	095	FCLAY		FAB3	DAUB?		2	2	5
7-68	095	095	FCLAY		FAB10			1	1	9
2-23/24	10001	10001	CBM	RTIL	FAB2	BRICK		2	2	150
2-23/24	10010	10010	CBM	RTIL	FAB3			1	1	2
2-23/24	10010	10010	CBM	RTIL	FAB5			1	1	9
2-24	10010	10010	CBM	RTIL	FAB3			1	1	10
2-24	10010	10010	FCLAY					6	5	14
2-23/24	10016	10016	CBM	RTIL	FAB3	BRICK		1	1	247
2-23/24	10035	10035	CBM	RTIL	FAB3	IMBREX		1	1	99
2-23/24	10035	10035	CBM	RTIL	FAB3	TEG?		1	1	19
2-23/24	10061	10061	CBM	RTIL	FAB3	TEG?		1	1	15
2-23/24	10070	10070	CBM	RTIL	FAB5			1	1	4
2-23/24	10080	10080	CBM	RTIL	FAB1	BRICK?		3	1	42
2-23/24	10083	10083	CBM	RTIL	FAB3	BRICK		2	2	266
2-23/24	10083	10083	CBM	RTIL	FAB1	TEG		3	1	121
2-23/24	10083	10083	CBM	RTIL	FAB5	BRICK		1	1	202
2-23/24	10083	10083	CBM	RTIL	FAB3	TEG		1	1	87
2-23/24	10083	10083	CBM	RTIL	FAB3			3	3	53
2-23/24	10083	10083	CBM	PMTIL	FAB1	FLAT	ROUND PEG HOLE	1	1	50
2-23/24	10085	10085	CBM	RTIL	FAB3	TEG/BRICK		2	2	145
2-23/24	10087	10087	CBM	RTIL	FAB3	BRICK?		6	1	61
2-23/24	10087	10087	CBM	RTIL	FAB3			1	1	6
2-23/24	10089	10089	CBM	RTIL	FAB3	BRICK		2	1	140
2-23/24	10100	10100	CBM	RTIL	FAB5			1	1	6
2-	10100	10100	CBM	RTIL	FAB2	IMBREX		1	1	21

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CS-Plot 23/24	Context	REFNO	class	cname	subfabric	Form	Description	Nosh	NoV	Weight
2-23/24	10107	10107	CBM	RTIL	FAB3			3	1	23
2-23/24	10127	10127	CBM	RTIL	FAB2	IMBREX		1	1	78
2-23/24	10127	10127	CBM	RTIL	FAB5			1	1	10
2-23/24	10127	10127	CBM	RTIL	FAB2	TEG		1	1	309
2-23/24	10134	10134	CBM	RTIL	FAB2	IMBREX		1	1	256
2-23/24	10134	10134	CBM	RTIL	FAB1	BRICK		1	1	103
2-23/24	10134	10134	CBM	RTIL				1	1	1
2-23/24	10134	10134	CBM	RTIL	FAB2	TEG		1	1	275
2-23/24	10134	10134	CBM	RTIL	FAB2	BRICK		2	1	165
2-23/24	10138	10138	CBM		FAB7			1	1	1
2-23/24	10193	10193	CBM	RTIL	FAB3	BRICK		2	2	217
2-23/24	10200	10200	CBM	RTIL	FAB3			1	1	19
2-23/24	10202	10202	CBM	RTIL	FAB3	BRICK		1	1	47
2-23/24	10221	10221	CBM	RTIL	FAB3	IMBREX		3	1	75
2-23/24	10221	10221	CBM	RTIL	FAB2			1	1	1
2-23/24	10224	10224	CBM	RTIL	FAB1	IMBREX		1	1	58
2-23/24	10224	10224	CBM	RTIL	FAB1	BRICK?		1	1	148
2-23/24	10224	10224	CBM	RTIL	FAB1	TEG?		1	1	186
2-23/24	10244	10244	CBM	RTIL	FAB1	IMBREX		1	1	73
2-23/24	10244	10244	CBM	RTIL	FAB2			1	1	3
2-23/24	10244	10244	CBM	RTIL	FAB1	TEG		7	1	243
2-23/24	10244	10244	CBM	RTIL	FAB3	IMBREX?	22M THICK; BIT THIN FOR A TEG BUT IT IS FLAT	2	1	114
2-23/24	10244	10244	CBM	RTIL	FAB1	TEG		1	1	303
2-23/24	10244	10244	CBM	RTIL	FAB1			1	1	19
2-	10244	10244	CBM	RTIL	FAB2	IMBREX		3	2	173

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CS-Plot 23/24	Context	REFNO	class	cname	subfabric	Form	Description	Nosh	NoV	Weight
2-23/24	10245	10245	CBM	RTIL	FAB2	BRICK		1	1	186
2-23/24	10245	10245	CBM	RTIL	FAB3	TEG/BRICK		1	1	90
2-23/24	10245	10245	CBM	RTIL	FAB1	TEG		1	1	104
2-23/24	10245	10245	CBM	RTIL	FAB3			1	1	6
2-23/24	10245	10245	CBM	RTIL	FAB2	IMBREX		1	1	94
2-23/24	10246	10246	CBM	RTIL	FAB8	TEG		1	1	68
2-23/24	10246	10246	CBM	RTIL	FAB3			1	1	3
2-23/24	10246	10246	CBM	RTIL			FRAGS	4	4	11
2-23/24	10300	10300	CBM	RTIL	FAB3	IMBREX		2	1	47
2-23/24	10300	10300	CBM	RTIL	FAB3	TEG/IMBREX		1	1	53
2-23/24	10307	10307	CBM	RTIL	FAB2	BRICK		1	1	398
2-23/24	10308	10308	CBM	RTIL	FAB2	IMBREX		1	1	41
2-23/24	10309	10309	CBM	RTIL	FAB3	BRICK		1	1	125
2-23/24	10316	10316	CBM	RTIL	FAB3			3	3	51
2-23/24	10316	10316	CBM	RTIL	FAB3	BRICK		1	1	245
2-14	14053	14053	CBM		FAB6	BRICK		1	1	6
2-19	15001	15001	CBM	RTIL	FAB1	BRICK		2	2	200
2-19	15001	15001	CBM	PMTIL	FAB3	BRICK		2	2	85
2-19	15001	15001	CBM				FRAGS	4	4	8
2-19	15001	15001	CBM	RTIL	FAB1	BOX	DIAGONAL MARKS	1	1	204
2-19	15032	15032	CBM	RTIL	FAB2			1	1	4
2-19	15058	15058	CBM	RTIL	FAB2	BRICK		1	1	1529
2-19	15081	15081	CBM	RTIL	FAB3			2	1	9
2-19	15084	15084	CBM	RTIL	FAB6	BRICK		1	1	420
2-19	15091	15091	CBM	RTIL	FAB3			1	1	10
2-19	15091	15091	CBM	RTIL	FAB1	BOX	// LINES IN BOTH DIRECTIONS	1	1	39
2-19	15110	15110	CBM	RTIL	FAB3	BRICK?		1	1	39
2-19	15136	15136	CBM	RTIL	FAB2			1	1	3
2-19	15151	15151	CBM	RTIL				1	1	5
2-19	15213	15213	CBM	RTIL	FAB2			1	1	67

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CS-Plot	Context	REFNO	class	cname	subfabric	Form	Description	Nosh	NoV	Weight
2-19	15228	15228	CBM	RTIL	FAB6	?		1	1	36
2-19	15255	15255	CBM	RTIL	FAB5	TEG		1	1	78
2-19	15255	15255	CBM	RTIL	FAB9	BRICK		1	1	251
2-19	15258	15258	CBM	RTIL	FAB2	BRICK		1	1	187
2-19	15262	15262	CBM	RTIL	FAB5	TEG		1	1	209
2-19	15280	15280	CBM	RTIL	FAB2	TEG?		1	1	192
2-19	15280	15280	CBM	RTIL	FAB6	BRICK		3	3	537
2-19	15280	15280	CBM	RTIL	FAB8	TEG		1	1	274
2-19	15280	15280	CBM	RTIL	FAB2	BRICK?		2	1	60
2-19	15342	15342	CBM	RTIL	FAB2	?		1	1	17
2-19	15350	15350	CBM	RTIL	FAB1	TEG		1	1	131
2-19	15350	15350	CBM	RTIL	FAB9	TEG?		1	1	152
2-19	15374	15374	CBM	RTIL	FAB5	BRICK		1	1	68
2-19	15374	15374	CBM	RTIL	FAB2	BRICK		1	1	137
2-19	15375	15375	CBM	RTIL	FAB1	BRICK		1	1	186
2-19	15375	15375	CBM	RTIL	FAB2	BRICK		1	1	55
2-19	15375	15375	CBM	RTIL	FAB9	BRICK		1	1	185
2-23	2301	2301	CBM	RTIL?	FAB4	IMBEX?	CURVED	1	1	21
2-23	2302	2302	CBM		FAB5	BRICK		1	1	66
9-76	3061	3061	CBM	PMTIL	FAB6	LAND DRAIN	U-SHAPED	1	1	302
9-76	3062	3062	CBM	MOD	FAB1	BRICK	FROGGED	1	1	822
9-76	3198	3198	CBM	PMTIL	FAB3	BRICK		1	1	12
4-40	40022	40022	CBM	PMTIL	FAB3	BRICK		1	1	52
4-40	40151	40151	CBM	RTIL?	FAB1	IMBEX?	CURVED	1	1	222
4-40	40151	40151	CBM	RTIL?	FAB2	TEG?	HANDMADE	1	1	311
4-40	40154	40154	CBM	RTIL?	FAB1	IMBEX?	CURVED	2	1	332
4-40	40161	40161	CBM	PMTIL	FAB3	BRICK		1	1	1
4/48	48179	48179	CBM	RTIL	FAB3			1	1	2
YARD	5011	5011	CBM	PMTIL	FAB7	BRICK		1	1	38
YARD	5012	5012	CBM	PMTIL	FAB1	BRICK		1	1	10
6-59	5136	5136	CBM	PMTIL	FAB1	BRICK		1	1	75
3-35	5278	5278	CBM	PMTIL	FAB1	BRICK		1	1	28
2-26	5385	5385	CBM	PMTIL	FAB3	BRICK		1	1	26
5-54	54002	54002	FCLAY		FAB3			1	1	9
5-54	54012	54012	FCLAY		FAB3			1	1	4
5-54	54019	54019	FCLAY		FAB3	DAUB	UNDULATIONS SUGGESTIVE OF GROOVES	1	1	8
5-54	54022	54022	FCLAY		FAB3			1	1	14
5-54	54022	54022	FCLAY		FAB3	DAUB	UNDULATIONS SUGGESTIVE OF GROOVES	4	4	21
5-54	54022	54022	FCLAY		FAB3	LOOM WEIGHT		1	1	23

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CS-Plot	Context	REFNO	class	cname	subfabric	Form	Description	Nosh	NoV	Weight
5-54	54033	54033	FCLAY		FAB3	LOOMWEIGHT?		1	1	14
5-54	54033	54033	FCLAY		FAB3	DAUB	GROOVES IN CLAY; ONE 12MM DIA	4	4	51
5-54	54045	54045	FCLAY		FAB3	DAUB?		3	2	26
5-54	54079	54079	FCLAY		FAB3	DAUB?		1	1	3
5-54	54091	54091	CBM		FAB6	BRICK		1	1	5
2-26	5445	5445	CBM	PMTIL	FAB7	FLAT		1	1	6
9-83	5508	5508	CBM		FAB6	BRICK		1	1	13
9-83	5509	5509	CBM	PMTIL	FAB3	BRICK		1	1	95
3-35	5510	5510	CBM	WHITE		WALT	STAMPED LETTERING UNDERNEATH 'IN EN.'	1	1	2
YARD	5515	5515	CBM		FAB5	BRICK		1	1	15
7-65	65055	65055	CBM		FAB6			1	1	3