The Fired and Unfired Clay from Lanton Quarry, Northumberland (LAN06)

Alan Vince and Kate Steane

Six hundred and seventy-four fragments of fired and unfired clay of Early Anglo-Saxon date were collected during the Lanton Quarry excavations by Archaeological Research Services Ltd. These included a number of loomweights of annular form, typical of the 5th to 7th centuries. The remainder consisted of amorphous fired clay (Table 1, FCLAY); unfired clay (Table 1 GEO); a small fragment with two flat faces, meeting at a slightly obtuse angle (100 degrees, Table 1 FLOOR TILE?) and fragments with flat or curved faces which do not appear to come from loomweights and in some cases have a better-finished "front" surface and a poorer "back". These are interpreted as daub, but it should be noted that none have wattle impressions and if wattle and daub had been used one might expect to find it in larger quantities (Table 1 DAUB and DAUB?). Very little more can be said about the material except for the loomweights and the following report therefore concentrates on these.

Table 1

Cname	Form	Fragments	Objects	Weight (gm)
FCLAY	DAUB	10	10	378
	DAUB?	5	5	37
	FCLAY	382	357	2898
	FLOOR TILE?	1	1	9
	LOOMWEIGHT	217	153	6772
FCLAY Total		615	526	10094
GEO	GEO	59	57	1509
GEO Total		59	57	1509
Grand Total		674	583	11603

Archaeological context

The majority of the finds come from the fills of sunken-featured buildings, in particular SFB 4, where the finds consist mainly of loom weights found in a line along the north wall and northwest corner of the building, between two clay pads interpreted as the supports for a warp weighted loom (Context 63). Loomweight fragments were recovered from the fills of SFB 1, 3 ,4 ,6 and 7 and from a post-hole fill from post-built structure 4.

Table 2

context group	Fragments	Objects	Weight (gm)
Post-Built Building 1	1	1	3
Post-Built Building 4	26	25	164
Sunken Featured building 1	37	36	518
Sunken Featured building 2	143	141	1121

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Sunken Featured building 3	42	22	795
Sunken Featured building 4	297	226	6539
Sunken Featured building 5	35	34	245
Sunken Featured building 6	92	90	948
Sunken Featured building 7	3	2	56
Pit 51	1	1	6
Pit 49	50	36	1450
Pit 121	4	4	6
Hearth 263	4	4	542
Context 181	2	1	1
Grand Total	737	623	12394

Fabric

Visually, most of the fired clay has a similar appearance, consisting of soft light grey clay with sparse large angular rock inclusions when unfired or low-fired and hard brown clay when fired, whether deliberately or accidentally (e.g. Fig 67). Thin sections were taken of three loom weights, a sample of unfired "clay" whose texture suggests it is mainly composed of subsoil and a sample of fired clay from a hearth.

Table 3

Context	phase	group	TSNO	REFNO	context group
063	ESAX	loom1	V5038	<65>	Sunken Featured building 4
263	ND	fclay	V5062	<392>	Hearth 263
063	ESAX	loom2	V5029	<100B>	Sunken Featured building 4
049	ND	loam	V5061	<170D>	Pit 49
015	ESAX	loom1	V5058	<33B>	Sunken Featured building 1

Subsamples of these samples were also analysed using Inductively-coupled plasma spectroscopy (ICP-AES) together with a further 30 samples of loomweights (Table 4) .

Factor analysis of the chemical data indicates that the samples can be divided into two groups. The second group is distinguished by higher iron, chromium, nickel, vanadium, scandium, magnesium, copper, zinc and cobalt values than the first group (all relative to aluminium). The thin section analysis confirms that the first group has a lighter-coloured groundmass than the second as well as a higher silica and other rock and mineral inclusions content.

The fired clay from hearth 263 and the "loam" from pit 49 both have similar characteristics in thin section and chemical composition to those of the second group of loomweights.

Two samples of pottery were also analysis. One is clearly imported to the site whilst the other matches the first loomweight group.

This evidence suggests that the second group of loomweights was produced from locally available clay, as shown by the similarity of the fabric, in thin section and chemical composition, to the "loam" and fired clay sample from hearth 263. The first loomweight fabric, and the locally-made pottery, however, cannot be linked to the site itself, but since the rock fragments in this group are altered volcanic rocks, which form the majority of the

material in the Lanton Quarry gravel this group too is presumably made in northeastern England, most likely also close to the site.

Table 4

Context	phase	group	TSNO	REFNO	context group
063	ESAX	Loom 2	V5028	100/A	Sunken Featured building 4
063	ESAX	Loom 2	V5030	100/C	Sunken Featured building 4
063	ESAX	Loom 2	V5031	100/D	Sunken Featured building 4
063	ESAX	Loom 1	V5032	100/F	Sunken Featured building 4
063	ESAX	Loom 1	V5033	100/G	Sunken Featured building 4
063	ESAX	Loom 2	V5034	100/H	Sunken Featured building 4
063	ESAX	Loom 2	V5035	100/I	Sunken Featured building 4
063	ESAX	Loom 2	V5036	62/A	Sunken Featured building 4
063	ESAX	Loom 2	V5037	62/B	Sunken Featured building 4
063	ESAX	Loom 1	V5039	66/A	Sunken Featured building 4
063	ESAX	Loom 1	V5040	68	Sunken Featured building 4
063	ESAX	Loom 2	V5041	72/A	Sunken Featured building 4
063	ESAX	Loom 2	V5042	72/B	Sunken Featured building 4
063	ESAX	Loom 2	V5043	72/C	Sunken Featured building 4
063	ESAX	Loom 1	V5044	74	Sunken Featured building 4
063	ESAX	Loom 1	V5045	76/A	Sunken Featured building 4
063	ESAX	Loom 1	V5046	76/B	Sunken Featured building 4
063	ESAX	Loom 1	V5047	79/A	Sunken Featured building 4
063	ESAX	Loom 1	V5048	79/C	Sunken Featured building 4
063	ESAX	Loom 1	V5049	98	Sunken Featured building 4
063	ESAX	Loom 1	V5050	99/A	Sunken Featured building 4
063	ESAX	Loom 1	V5051	99/B	Sunken Featured building 4
063	ESAX	Loom 1	V5052	99/D	Sunken Featured building 4
281	ESAX	Loom 1	V5053	131/A	Sunken Featured building 6
281	ESAX	Loom 1	V5054	131/B	Sunken Featured building 6
281	ESAX	Loom 1	V5055	131/D	Sunken Featured building 6
1130	ESAX	Loom 1	V5056	250	Post-Built Building 4
281	ESAX	Loom 2	V5057	132	Sunken Featured building 6
015	ESAX	Loom 1	V5059	33/A	Sunken Featured building 1
1021	ESAX	Loom 1	V5060	152/D	Sunken Featured building 3

Loomweights

All of the reconstructable loom weights were drawn and any metrical and non-metrical traits were recorded. All the weights could be classified as annual, in that they are broadly symmetrical around their girth with a wide central hole, whereas the bun-shaped weights which replaced them during the 7th century have narrower holes and are more clearly non-symmetrical. Having said that, most of the better-preserved examples had clearly defined top and bottom faces.

Few examples had diameters which could be reliably reconstructed but in most cases the distance from the girth to the hole and from “top” to “bottom” were measurable. Fig 1 shows a

bi-plot of thickness against breadth. Despite the existence of two group 1 loomweights which are thicker than any group 2 weight and two group 2 weights which are broader than any group 1 weight, the means for both groups are very similar and the standard deviations for all three groups show almost total overlap.

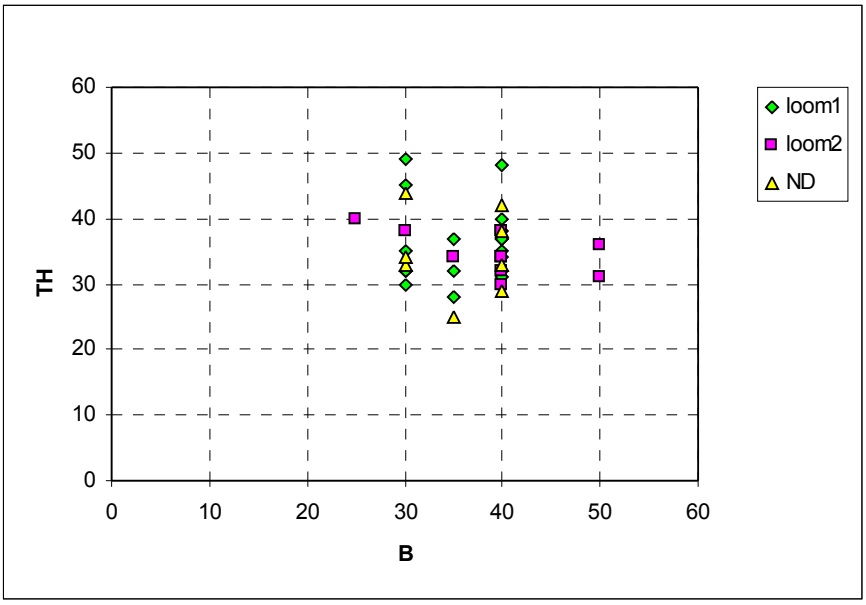


Figure 1

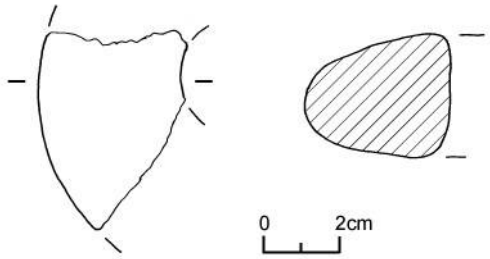
The only other variable of note is the presence of decoration. This consists of some incised lines, which might be deliberate but might not and a few weights with a single finger impression on the "top" surface. Three weights with possible deliberate indents and one with incised lines was present. None came from the main assemblage of weights from SFB4 but instead three came from SFB6 and one from SFB1.

Catalogue

The best-preserved loomweights are catalogued here. The catalogue entry includes photographs (A Vince) and reconstruction drawings (C Bentley). Each weight is referred to by its unique register number.

<100G> SFB4 (063)

Figure 2 <100G>



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<62A> SFB4 (063)

Figure 4 <62A>

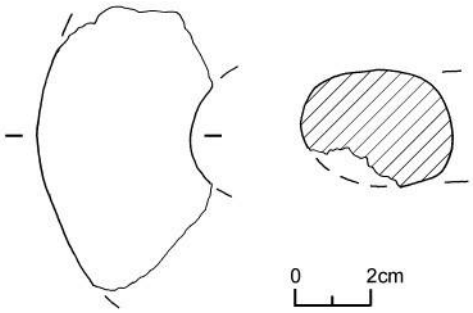

Figure 5 <62A>

<100B> SFB4 (063)

Thin section and ICPS analysis (V5029).

Loomweight fabric 2.

Figure 6 <100B>

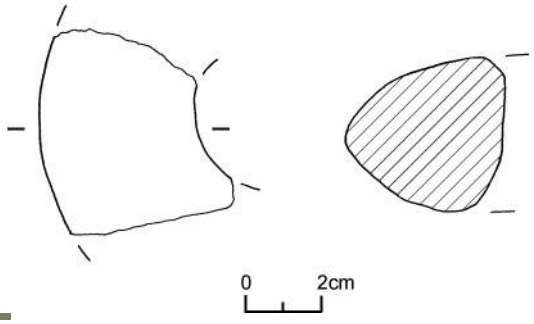

Figure 7

<100F> SFB4 (063)

Figure 8 <100F>

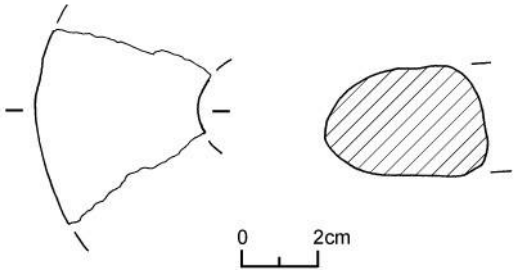

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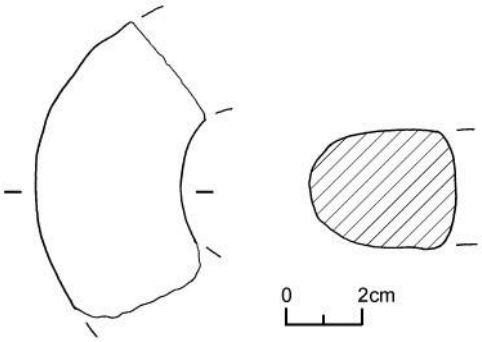
Figure 10 <99A>



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<61A> SFB4 (063)

Figure 12 <61A>

<99B> SFB4 (063)

Figure 13 <99B>

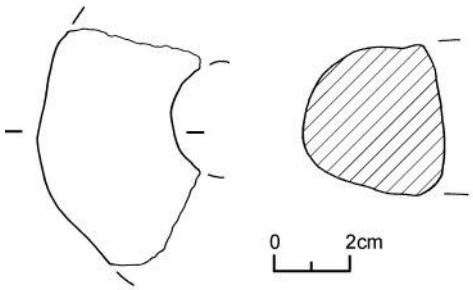

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Figure 15 <72C>

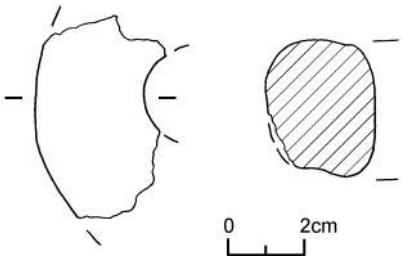

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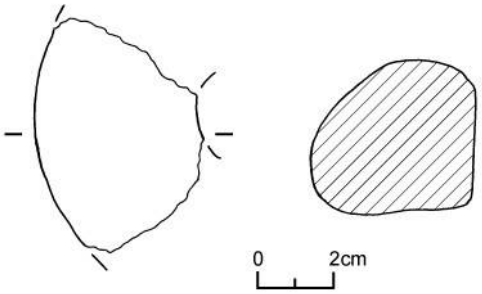
Figure 17 <76A>



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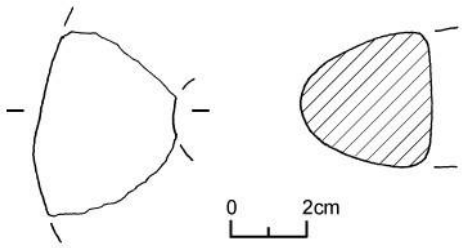

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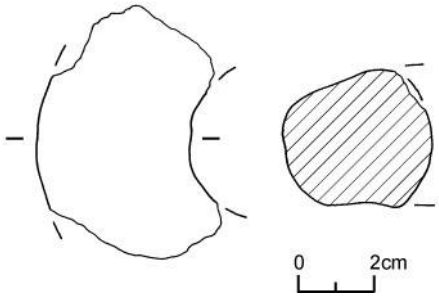

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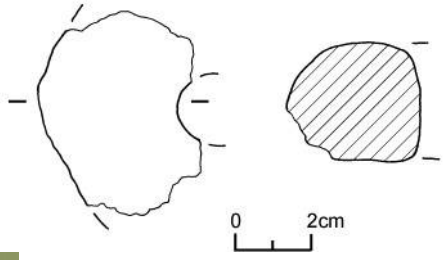

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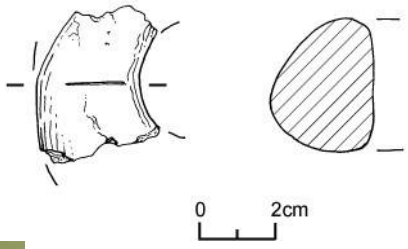

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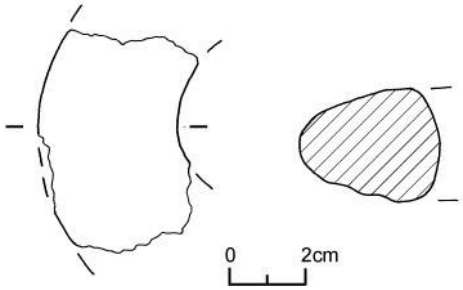

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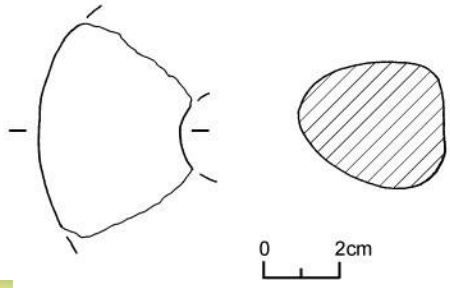

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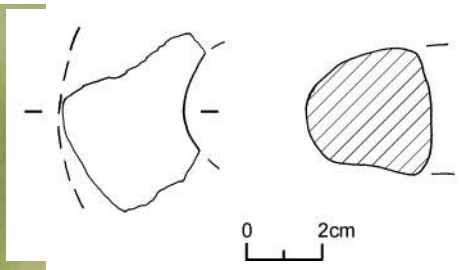

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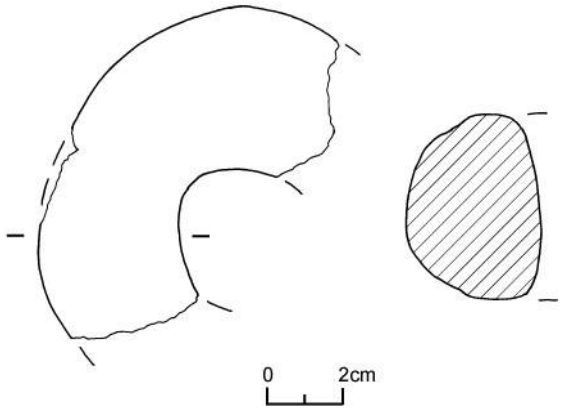
Figure 33 <74>



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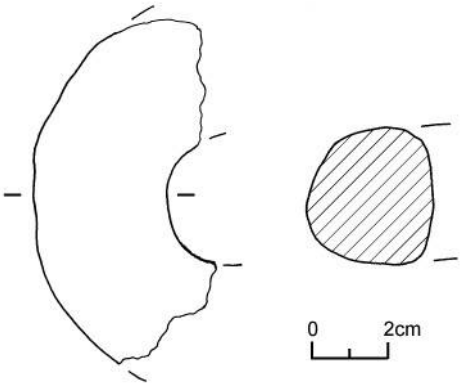
<99D> SFB4 (063)

Figure 36 <99D>



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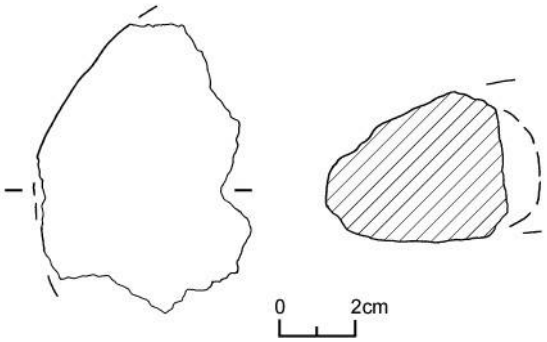
<100A> SFB4 (063)

Figure 38 <100A>



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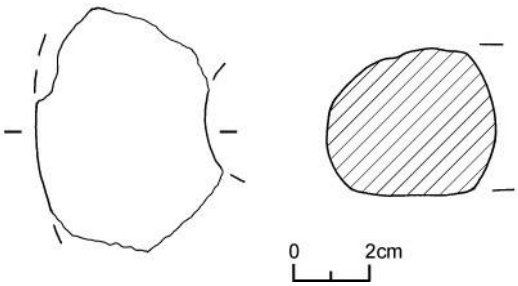
<72B> SFB4 (063)

Figure 40 <72B>



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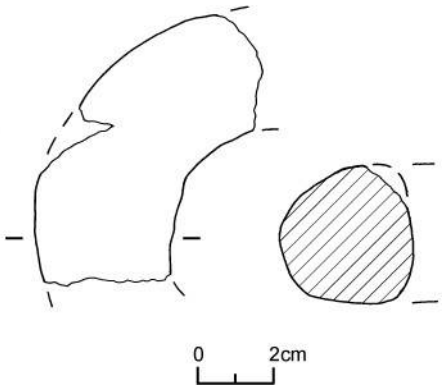

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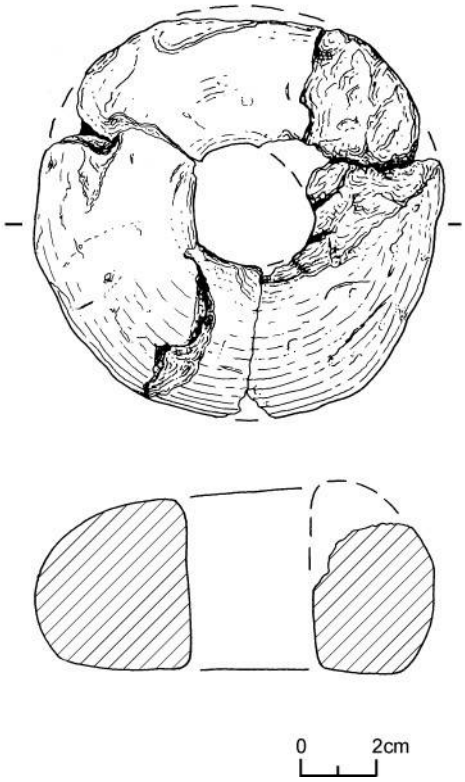

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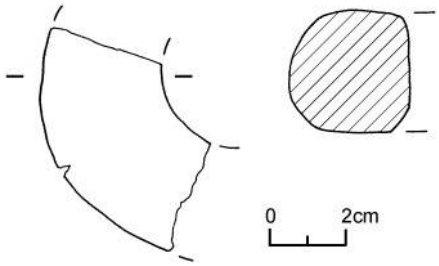

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Figure 50 <79A>

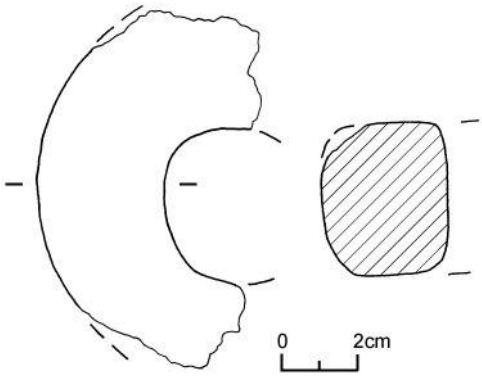


Figure 51 <79A>

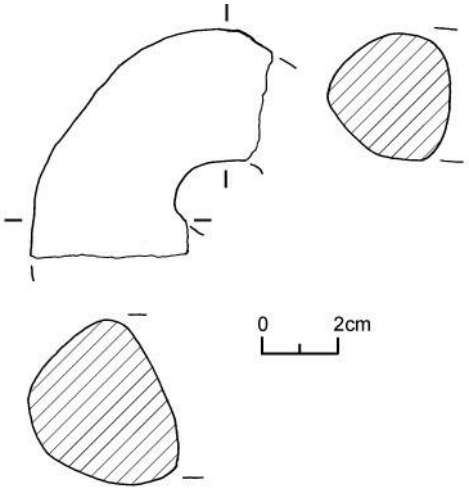
Figure 52 <79A>

<65> SFB4 (063)

Thin section and ICPS analysis (V5038).

Loomweight fabric 1.

Figure 53 <65>



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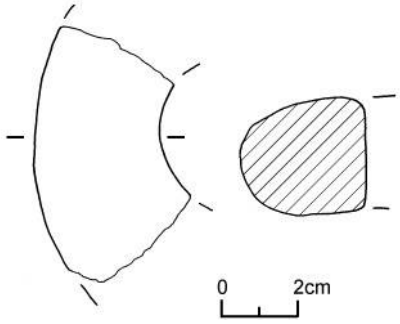
<68> SFB4 (063)

Figure 55 <68>



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<131A> SFB6 (281)

Figure 57 <131A>

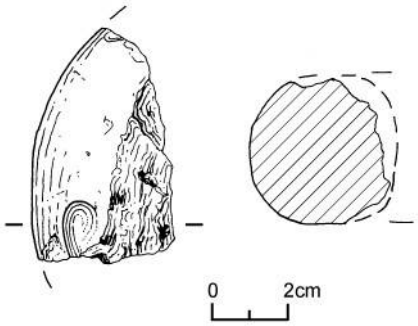


Figure 58 <131A>

Figure 59 <131A> detail of possible deliberate indentation

<131B> SFB6 (281)

Figure 60 <131B>

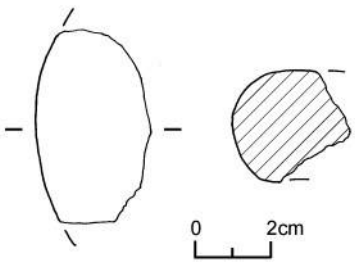


Figure 61 <131B>

<131D> SFB6 (281)

Figure 62 <131D>

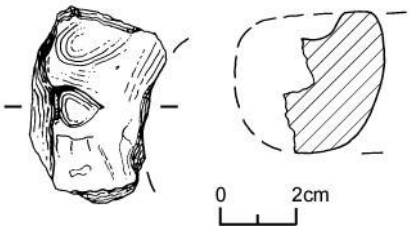


Figure 63 <131D>

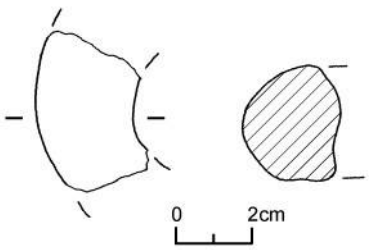
Figure 64 <131D> detail of possible deliberate indent

Figure 65 <131D> close-up of possible indent

<250> Post-Built Structure 4 (1130)

Found in the fill of a subovoid triple post-hole.

Figure 66 <250>



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<132> SFB6 (281)

Figure 68 <132>

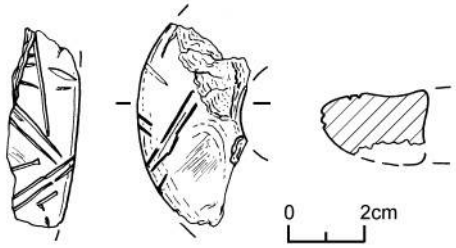


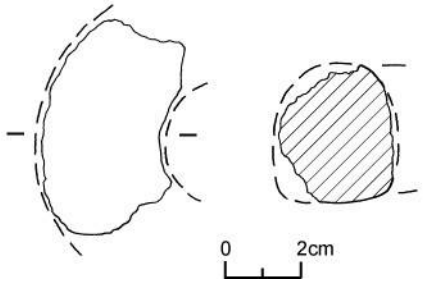
Figure 69 <132>

Figure 70 <132> detail of possible decoration

<33B> SFB1 (015)

Thin section and chemical analysis (V5058). Loomweight Fabric 1.

Figure 71 <33B>



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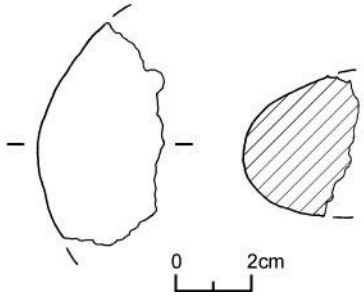
<33A> SFB1 (015)

Figure 73 <33A>



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<152D> SFB3 (1021)

Figure 75 <152D>

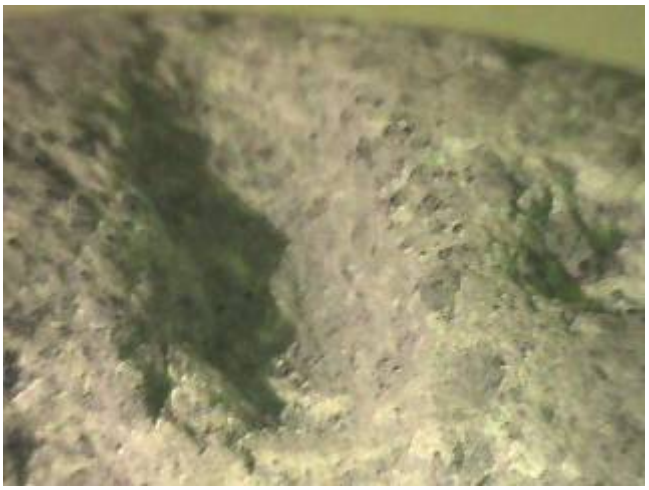

Figure 76 <152D> detail of possible deliberate indent

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