

Assessment of the Anglo-Saxon Fired and Unfired Clay Objects from Lanton Quarry

Alan Vince and Kate Steane

The section headings in the following assessment report refer to those in the *Management of Archaeological Projects* (HBMC 1991), Appendix 4.

1. Factual data

1.1. Statement on the material

1.1.i. Quantity

Two hundred and fourteen fragments of fired and unfired clay were recovered from early Anglo-Saxon deposits at Lanton Quarry. These probably represent no more than 151 objects and quite likely considerably fewer. The material weighs in total 6.703 Kg giving an average fragment weight of 53 gm.

1.1.ii. Provenance

Table 1 lists the context of the material. It can be seen that far and away the largest quantity comes from the fill of a single sunken-featured building, SFB4. This material is therefore likely to represent the weights from a single warp-weighted loom.

Table 1

context group	Sum of Nosh	Sum of NoV	Sum of Weight	Average of ASW
Post-Built Building 4	1	1	36	36
Sunken Featured building 1	3	3	148	49
Sunken Featured building 3	1	1	73	73
Sunken Featured building 4	187	124	5,891	54
Sunken Featured building 6	21	21	525	55
Sunken Featured building 7	1	1	30	30
Grand Total	214	151	6,703	53

All of the diagnostic fragments come from annular loom weights, the earliest of the three loom weight types found in Anglo-Saxon England. Roman and earlier loom weights are of a completely different, triangular form (Wheeler 1935). The transition from the annular to the bun-shaped form seems to have taken place before the occupation of mid-Saxon settlements such as Lundenwic had begun and therefore a broad date range of mid/late 5th to early 7th centuries can be assigned to the material.

There is no possibility of contamination and there is no possibility of any of these weights being of pre-Anglo-Saxon date. It is nevertheless possible that the smaller collections (i.e. all except those from SFB4) were not used during the occupation of these structures but were incorporated into refuse used to backfill the features some time after they ceased to be used. Nevertheless, the dating of the form clearly makes it impossible for them to be substantially earlier.

1.1.iii. range and variety

Table 2 lists the identifiable material present in the collection. From this, it is clear that all of the features produced annual loomweights and that there is no evidence for the use of daub or for the use of clay as hearth foundations, two other common uses for clay on early Anglo-Saxon settlement sites. The weights were clearly meant to be symmetrical around their widest point but despite this it is almost always possible to recognise a “top” and a “bottom”. This must reflect the method of manufacture. When in use, the weights would have had a group of warp threads tied to them and would have hung on their “sides”, like curtain rings. All of the weights used in one loom should have been roughly similar in size and weight in order to give an even tension to the warp. Therefore, the presence of one weight which was of a noticeably larger size, from SFB6, indicates that this weight, at least, comes from a second loom.

Table 2

context group	Description	Sum of Nosh	Sum of NoV	Sum of Weight	Average of ASW
Post-Built Building 4	ANNULAR LOOMWEIGHT, SMOOTH TOP, PITTED BOTTOM	1	1	36	36
Post-Built Building 4 Total		1	1	36	36
Sunken Featured building 1	ANNULAR LOOMWEIGHT, CURVED SURFACE, NO MEASUREMENTS	1	1	28	28
	ANNULAR LOOMWEIGHT, SMOOTH TOP, MOSTLY MISSING BOTTOM	1	1	63	63
	ANNULAR LOOMWEIGHT, SMOOTH TOP, PITTED BOTTOM	1	1	57	57
Sunken Featured building 3	PART OF ANNUAL LOOMWEIGHT ABOUT 105 DIA WITH HOLE AROUND 30 ACROSS; DIAGONAL GROOVE 8 BY 25	1	1	73	73
Sunken Featured building 4	ANNULAR LOOMWEIGHT	3	3	257	86
	ANNULAR LOOMWEIGHT FRAG	1	1	33	33
	ANNULAR LOOMWEIGHT FRAG, NO MEASUREMENTS	2	2	116	58
	ANNULAR LOOMWEIGHT FRAG, NO THICKNESS	1	1	61	61
	ANNULAR LOOMWEIGHT FRAGS; 2 SURFACES, NO MEASUREMENTS	12	12	34	3
	ANNULAR LOOMWEIGHT, AT LEAST ONE SURFACE, NO MEASUREMENTS	24	24	665	26
	ANNULAR LOOMWEIGHT, IRREGULAR BUT SMOOTH SURFACE, NO MEASUREMENTS	1	1	55	55
	ANNULAR LOOMWEIGHT, IRREGULAR TOP AND BOTTOM	1	1	57	57
	ANNULAR LOOMWEIGHT, IRREGULAR TOP AND PITTED BOTTOM	2	2	147	74
	ANNULAR LOOMWEIGHT, NO CLEAR SURFACES	2	1	111	56
	ANNULAR LOOMWEIGHT, NO MEASUREMENTS	13	1	82	6

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ANNULAR LOOMWEIGHT, PITTED BASE FRAG	3	1	28	9
ANNULAR LOOMWEIGHT, PITTED SURFACE, NO TOP	1	1	47	47
ANNULAR LOOMWEIGHT, ROUGH SURFACES	2	2	155	78
ANNULAR LOOMWEIGHT, ROUGH TOP AND BOTTOM	1	1	165	165
ANNULAR LOOMWEIGHT, SMOOTH SURFACE	1	1	69	69
ANNULAR LOOMWEIGHT, SMOOTH SURFACE, NO MEASUREMENTS	5	4	112	26
ANNULAR LOOMWEIGHT, SMOOTH TOP AND BOTTOM	1	1	110	110
ANNULAR LOOMWEIGHT, SMOOTH TOP AND POKED BOTTOM	2	2	233	117
ANNULAR LOOMWEIGHT, SMOOTH TOP, PITTED BOTTOM	1	1	64	64
ANNULAR LOOMWEIGHT, VERTICAL GROOVE ON TOP, 20 FROM INNER EDGE; SMOOTH TOP, PITTED BOTTOM	1	1	43	43
ANNULAR LOOMWEIGHT; IRREGULAR TOP, POKED UNDERNEATH	5	1	117	23
ANNULAR LOOMWEIGHT; NO MEASUREMENTS	8	8	230	29
ANNULAR LOOMWEIGHT; POKED TOP AND BASE	1	1	112	112
ANNULAR LOOMWEIGHT; POKED TOP, BASE LOST SURFACE	1	1	121	121
ANNULAR LOOMWEIGHT; POKED TOP, LOST BASE AND INNER EDGE, LIMITED MEASUREMENTS	1	1	25	25
ANNULAR LOOMWEIGHT; SMOOTH TOP AND BOTTOM	3	2	214	77
ANNULAR LOOMWEIGHT; SMOOTH TOP WITH GROOVE, POKED BASE	1	1	114	114
ANNULAR LOOMWEIGHT; SMOOTH TOP, BASE LOST SURFACE	15	2	396	66
ANNULAR LOOMWEIGHT; SMOOTH TOP, GRASS/STRAW MARKS UNDERNEATH	7	2	303	43
ANNULAR LOOMWEIGHT; SMOOTH TOP, LOST BASE AND OUTER EDGE, LIMITED MEASUREMENTS	1	1	37	37
ANNULAR LOOMWEIGHT; SMOOTH TOP, POKED BOTTOM	1	1	57	57
ANNULAR LOOMWEIGHT; SMOOTH TOP, POKED UNDERNEATH	11	4	798	63
ANNULAR LOOMWEIGHT; SMOOTH TOP, POSS LOST BASE	8	1	129	16
ANNULAR LOOMWEIGHT; SMOOTH TOP, ROUGH UNDERNEATH	5	1	78	16
AT LEAST ONE ANNULAR LOOMWEIGHT; NO MEASUREMENTS, ALL FRAGS HAVE SURFACES	7	7	62	9
FRAGS, NO MEASUREMENTS	4	1	22	6
POSS ANNULAR LOOMWEIGHT FRAG, NO				

	MEASUREMENTS	1	1	46	46
	POSS ANNULAR LOOMWEIGHT FRAGS, MAYBE 110/120 DIA? NO OTHER MEASUREMENTS	3	1	110	37
	POSS ANNULAR LOOMWEIGHT FRAGS, NO MEASUREMENTS	10	10	83	8
	POSS ANNULAR LOOMWEIGHT FRAGS, SMOOTH SURFACE, NO MEASUREMENTS	3	3	17	6
	POSS SAME LOOMWEIGHT AS 63/A BUT NO JOINS; NO MEASUREMENTS	3	2	70	23
	PROB ANNULAR LOOMWEIGHT FRAGS, NO SURFACES, NO MEASUREMENTS	8	8	106	13
Sunken Featured building 6	ANNULAR LOOMWEIGHT, SMOOTH TOP, BOTTOM MISSING	1	1	51	51
	ANNULAR LOOMWEIGHT, SMOOTH TOP, PITTED BOTTOM	1	1	91	91
	FRAGS WITH A CURVED SURFACE	18	18	325	18
	VERY LARGE ANNULAR LOOMWEIGHT, SMOOTH TOP WITH GOUGED HOLE 8 DIA	1	1	58	58
Sunken Featured building 7	ROUNDED SURFACE, NO MEASUREMENTS	1	1	30	30
Grand Total		214	151	6,703	53

1.1.iv. Condition

The material is extremely friable and has not been cleaned, so is covered with sandy soil. Some of the pieces have a blue-grey colour, suggesting that they are completely unfired. There is a debate amongst specialists about whether loom weights were intended to be fired, to give them added strength and to minimise the dust which they would otherwise generate in use, or whether they were used in an unburnt state and only occasionally became fired due to a conflagration. Traces of use were sought, such as wear which might be expected to occur where the warp threads were attached. No such evidence was observed. This is consistent, however, with results from the study of other collections and it seems likely that in normal use no such wear would have occurred. Similarly, there was no clear evidence for decoration or personal identification marks, both of which have been claimed at other sites.

1.1.v. Primary sources & documentation

There are no primary sources or documentation which might enhance the study of this collection.

1.2. Means of collecting the data

This assessment is made from a study of all of the fired and unfired clay samples from Anglo-Saxon contexts, recording the fragment count, number of vessels, weight, use and condition. Any decoration was noted.

2. Statement of potential

2.1. The value of the data

2.1.i. Aims of research

The fired and unfired clay provides clear evidence for the use of the warp-weighted loom at Lanton Quarry, including at least two separate looms. Anglo-Saxon loom weights are uncommon in the north-east of England and these examples are certainly important evidence for early textile production in the region. They are also worthy of conservation and display.

The precise form of the weights might be an indicator of date and cultural affinities and therefore all examples which are complete enough to be drawn should be drawn. Although there are over 150 individually recorded pieces of weight it is likely that several of these from SFB4 will actually reconstruct, reducing the number of drawings considerably. Only obvious cross-fits between bags were sought and recorded during the assessment and it may be that reconstruction and illustration should take place alongside the conservation procedure.

The other importance of the collection is that it provides information on the clay resources available to the inhabitants of the Lenton Quarry site. The site itself sits on gravel and sand and the clay used to make the loom weights must have been collected elsewhere. However, it is likely that suitable clays could be found within a short distance from the site. Analysis of the clay is useful for two reasons. Firstly, it provides a base with which to compare the contemporary pottery. This should answer questions such as whether the pottery was locally made or imported to the site and if locally made whether it was prepared in the same way as that used for the loom weights. Secondly, a detailed study of the material from the different structures using thin section and chemical analysis would reveal whether all came from the same clay exposure. If not, then this would be a means of determining the relationship between the various structures, either in terms of the taphonomy of their backfills or their date or social relationships of their users.

2.1.ii. Integration of studies with other materials

The loom weights should be studied in conjunction with the pottery since they may be made from the same raw materials.

2.1.iii. Costing

Table 3 lists the various tasks which have been identified here and provides costs for those which could be carried out by AVAC.

Table 3

Task	Description	Rate	Cost	VAT
1	Select for illustration, reconstruction,	£25.00 per	£50.00	£8.75

	photography and document decisions	hour		
2	Illustration of 20 vessels	£20.00 per vessel	£400.00	£70.00
3	Photography	£25.00 per hour	£50.00	£8.75
4	Reconstruction of weights	Not included in costing		
5	Thin section analysis of 18 weights	£25.00 per section	£450.00	£78.75
6	Chemical analysis (ICP-AES carried out at Royal Holloway College, London)	£25.00 per sample	£450.00	£78.75
7	Production of Report	£25.00 per hour	£400.00	£70.00
9	Packaging of material for return to Newcastle	£25.00 per hour	£100.00	£17.50
10	Courier	Not included in costings		
	Total		£1900.00	£332.50

3. Archive Requirements

3.1. Storage and curation

3.1.i. storage requirements

The fired and unfired clay is at present wrapped in tissue paper but present in plastic bags, with the potential for damage during transport. It would be better for the sherds to be packed in plastic Stewart boxes, within their plastic bags, with bubble wrap or similar material used to separate the bags. Given the lack of loom weights of this period locally and the potential for display, those objects which could be reconstructed and displayed should be restored after an assessment by a professional conservator.

3.1.ii. Retention and discard policy

It is recommended that all of this collection is kept for future study.

Bibliography

HBMC (1991) Management of Archaeological Reports. English Heritage

Wheeler, R E M (1935) London and the Saxons. London Museum Catalogue 6

Appendix 1

Context	Description	Part	Nosh	NoV	Weight	ASW	Condition	Use
015	ANNULAR LOOMWEIGHT, SMOOTH TOP, PITTED BOTTOM	PART	1	1	57	57		
015	ANNULAR LOOMWEIGHT, CURVED SURFACE, NO MEASUREMENTS	PART	1	1	28	28		
015	ANNULAR LOOMWEIGHT, SMOOTH TOP, MOSTLY MISSING BOTTOM	PART	1	1	63	63		
063	ANNULAR LOOMWEIGHT; SMOOTH TOP, GRASS/STRAW MARKS UNDERNEATH	PART	3	1	127	42		
063	ANNULAR LOOMWEIGHT	PART	1	1	29	29		
063	ANNULAR LOOMWEIGHT; SMOOTH TOP, POCKED UNDERNEATH	PART	1	1	70	70	SOME LOSS OF SURFACE	
063	POSS ANNULAR LOOMWEIGHT FRAGS, MAYBE 110/120 DIA? NO OTHER MEASUREMENTS	PART	3	1	110	36	UNDERFIRED	
063	ANNULAR LOOMWEIGHT, NO CLEAR SURFACES	PART	2	1	111	55.5	UNDERFIRED	
063	ANNULAR LOOMWEIGHT; POCKED TOP, BASE LOST SURFACE	PART	1	1	121	121	TROWEL DAMAGE	
063	ANNULAR LOOMWEIGHT FRAG, NO MEASUREMENTS	PART	1	1	53	53		
063	ANNULAR LOOMWEIGHT; POCKED TOP AND BASE	PART	1	1	112	112		
063	ANNULAR LOOMWEIGHT; SMOOTH TOP, POCKED UNDERNEATH	PART	1	1	67	67		
063	ANNULAR LOOMWEIGHT; SMOOTH TOP, POCKED UNDERNEATH	PART	2	1	59	29.5		
063	ANNULAR LOOMWEIGHT; SMOOTH TOP WITH GROOVE, POCKED BASE	PART	1	1	114	114		
063	ANNULAR LOOMWEIGHT; SMOOTH TOP, GRASS/STRAW MARKS UNDERNEATH	PART	4	1	176	44		
063	POSS ANNULAR LOOMWEIGHT FRAG, NO MEASUREMENTS	FRAG	1	1	46	46		
063	ANNULAR LOOMWEIGHT FRAG	PART	1	1	33	33		
063	ANNULAR LOOMWEIGHT; SMOOTH TOP, ROUGH UNDERNEATH	PART	5	1	78	15.6		

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Context	Description	Part	Nosh	NoV	Weight	ASW	Condition	Use
063	ANNULAR LOOMWEIGHT; SMOOTH TOP, POCKED UNDERNEATH	WHOLE	7	1	602	86	FRESH BREAKS; 7 + MANY TINY FRAGS AND DUST	
063	ANNULAR LOOMWEIGHT; SMOOTH TOP AND BOTTOM	PART	2	1	122	61		
063	ANNULAR LOOMWEIGHT; IRREGULAR TOP, POCKED UNDERNEATH	PART	5	1	117	23.4		
063	ANNULAR LOOMWEIGHT, IRREGULAR TOP AND PITTED BOTTOM	PART	1	1	78	78		
063	ANNULAR LOOMWEIGHT, VERTICAL GROOVE ON TOP, 20 FROM INNER EDGE; SMOOTH TOP, PITTED BOTTOM	PART	1	1	43	43		
063	ANNULAR LOOMWEIGHT, ROUGH SURFACES	PART	1	1	101	101		
063	ANNULAR LOOMWEIGHT, ROUGH SURFACES	PART	1	1	54	54		
063	ANNULAR LOOMWEIGHT, AT LEAST ONE SURFACE, NO MEASUREMENTS	FRAGS	8	8	169	21		
063	ANNULAR LOOMWEIGHT, AT LEAST ONE SURFACE, NO MEASUREMENTS	PART	16	16	496	31		
063	ANNULAR LOOMWEIGHT, PITTED SURFACE, NO TOP	PART	1	1	47	47		
063	ANNULAR LOOMWEIGHT; SMOOTH TOP, BASE LOST SURFACE	PART	2	1	239	119.5		
063	ANNULAR LOOMWEIGHT, SMOOTH SURFACE	PART	1	1	69	69		
063	POSS SAME LOOMWEIGHT AS 63/A BUT NO JOINS; NO MEASUREMENTS	PART	3	2	70	23	UNDERFIRED	
063	ANNULAR LOOMWEIGHT, SMOOTH SURFACE, NO MEASUREMENTS	PART	2	1	18	9		
063	ANNULAR LOOMWEIGHT, SMOOTH TOP, PITTED BOTTOM	PART	1	1	64	64		
063	ANNULAR LOOMWEIGHT, IRREGULAR TOP AND PITTED BOTTOM	PART	1	1	69	69		
063	ANNULAR LOOMWEIGHT, SMOOTH SURFACE, NO MEASUREMENTS	PART	1	1	25	25		
063	ANNULAR LOOMWEIGHT, SMOOTH SURFACE, NO MEASUREMENTS	PART	1	1	25	25		
063	ANNULAR LOOMWEIGHT, NO MEASUREMENTS	FRAGS	13	1	82	6	LOST SURFACES; FRAGMENTED;	

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Context	Description	Part	Nosh	NoV	Weight	ASW	Condition	Use
							UNDERFIRED	
063	ANNULAR LOOMWEIGHT, PITTED BASE FRAG	PART	3	1	28	9		
063	ANNULAR LOOMWEIGHT; NO MEASUREMENTS	FRAGS	8	8	230	28.75	LOST SURFACES; UNDERFIRED	
063	ANNULAR LOOMWEIGHT	PART	1	1	148	148	LOST SURFACES	
063	ANNULAR LOOMWEIGHT, IRREGULAR TOP AND BOTTOM	PART	1	1	57	57		
063	ANNULAR LOOMWEIGHT FRAGS; 2 SURFACES, NO MEASUREMENTS	FRAGS	12	12	34	3	FRAGMENTED: 12 + MANY TINY BITS	
063	FRAGS, NO MEASUREMENTS	PART	4	1	22	5.5	UNDERFIRED	
063	ANNULAR LOOMWEIGHT; SMOOTH TOP AND BOTTOM	PART	1	1	92	92		
063	ANNULAR LOOMWEIGHT; SMOOTH TOP, POCKED BOTTOM	PART	1	1	57	57		
063	ANNULAR LOOMWEIGHT; SMOOTH TOP, BASE LOST SURFACE	PART	13	1	157	12	FRAGMENTED: 13 + MANY TINY BITS	
063	ANNULAR LOOMWEIGHT; SMOOTH TOP, LOST BASE AND OUTER EDGE, LIMITED MEASUREMENTS	PART	1	1	37	37		
063	ANNULAR LOOMWEIGHT; POCKED TOP, LOST BASE AND INNER EDGE, LIMITED MEASUREMENTS	PART	1	1	25	25	UNDERFIRED	
063	POSS ANNULAR LOOMWEIGHT FRAGS, SMOOTH SURFACE, NO MEASUREMENTS	FRAGS	3	3	17	6		
063	ANNULAR LOOMWEIGHT	PART	1	1	80	80	LOST SURFACES	
063	ANNULAR LOOMWEIGHT; SMOOTH TOP, POSS LOST BASE	PART	8	1	129	16		
063	ANNULAR LOOMWEIGHT FRAG, NO MEASUREMENTS	FRAG	1	1	63	63		
063	ANNULAR LOOMWEIGHT, SMOOTH TOP AND BOTTOM	PART	1	1	110	110		
063	ANNULAR LOOMWEIGHT, SMOOTH TOP AND POCKED BOTTOM	PART	1	1	103	103		
063	ANNULAR LOOMWEIGHT, ROUGH TOP AND BOTTOM	PART	1	1	165	165	LOST SURFACES	
063	ANNULAR LOOMWEIGHT, SMOOTH TOP AND POCKED BOTTOM	PART	1	1	130	130		
063	ANNULAR LOOMWEIGHT, IRREGULAR BUT SMOOTH SURFACE, NO MEASUREMENTS	PART	1	1	55	55		

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Context	Description	Part	Nosh	NoV	Weight	ASW	Condition	Use
063	ANNULAR LOOMWEIGHT, SMOOTH SURFACE, NO MEASUREMENTS	PART	1	1	44	44		
063	PROB ANNULAR LOOMWEIGHT FRAGS, NO SURFACES, NO MEASUREMENTS	FRAGS	8	8	106	13.25	UNDERFIRED; FRAGMENTED	
063	ANNULAR LOOMWEIGHT FRAG, NO THICKNESS	FRAG	1	1	61	61	LOST SURFACES; UNDERFIRED	
063	AT LEAST ONE ANNULAR LOOMWEIGHT; NO MEASUREMENTS, ALL FRAGS HAVE SURFACES	FRAGS	7	7	62	9		
063	POSS ANNULAR LOOMWEIGHT FRAGS, NO MEASUREMENTS	FRAGS	10	10	83	8.3	UNDERFIRED; FRAGMENTED: 10 + MANY TINY	
083	ROUNDED SURFACE, NO MEASUREMENTS	FRAG	1	1	30	30		
281	FRAGS WITH A CURVED SURFACE	FRAGS	18	18	325	18		
281	ANNULAR LOOMWEIGHT, SMOOTH TOP, BOTTOM MISSING	PART	1	1	51	51		
281	VERY LARGE ANNULAR LOOMWEIGHT, SMOOTH TOP WITH GOUGED HOLE 8 DIA	PART	1	1	58	58		
281	ANNULAR LOOMWEIGHT, SMOOTH TOP, PITTED BOTTOM	PART	1	1	91	91		
1021	PART OF ANNUAL LOOMWEIGHT ABOUT 105 DIA WITH HOLE AROUND 30 ACROSS; DIAGONAL GROOVE 8 BY 25	PART	1	1	73	73	FRESH BREAK	
1130	ANNULAR LOOMWEIGHT, SMOOTH TOP, PITTED BOTTOM	PART	1	1	36	36		