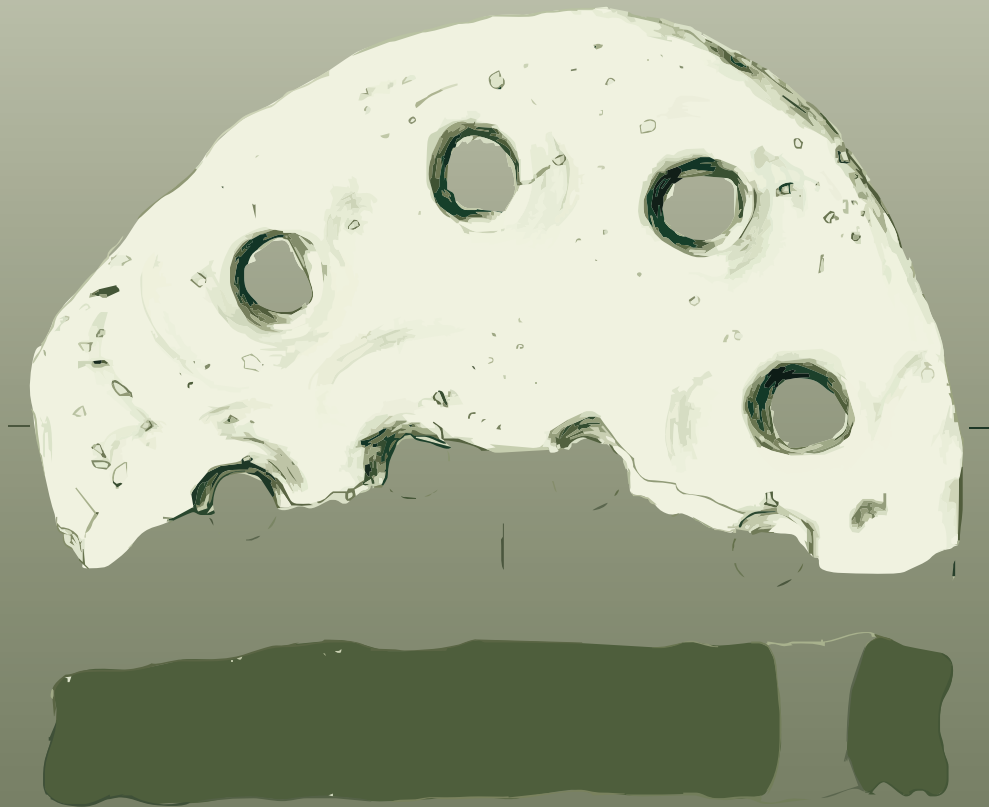


Landscape Evolution in the Middle Thames Valley

Heathrow Terminal 5 Excavations Volume 2

Fired Clay

(Section 9)



by Kayt Brown

SECTION 9

FIRED CLAY

by Kayt Brown

Introduction

A total of 5748 fragments (75,705g) of fired clay was recovered from PSH02, TEC05 and LFA05, spanning the Neolithic to post-medieval periods. The vast majority of this material comprised amorphous fragments although a small number of loomweights (both cylindrical and triangular), spindle whorls, slingshots, daub and other possible structural clay elements were also identified. Although spread across the range of areas excavated, there were very definite concentrations of fired clay material in area 61 and the Twin Rivers Transect (area 58), comprising 80% of the total material recovered.

The fired clay was quantified by context and observations regarding fabric and diagnostic characteristics were recorded along with measurements where obtainable. The post-medieval material was not analysed in any detail past initial quantification, although further details are available in the archive. No detailed fabric analysis was carried out as it became apparent at the assessment stage that fabric variation was very limited. The vast majority of the assemblage occurs in the same basic fabric, sandy with sparse flint and ferruginous inclusions. The only exception is a small quantity of material in a sandier fabric with no flint, and a small number of Bronze Age objects where additional coarse calcined flint has been added to the basic fabric described above.

Ceramic objects

Slingshots

Two complete examples, from Middle/Late Iron Age and early Roman contexts respectively, were recovered, with a further fragmented example from a Roman

context. The two complete examples are both ovoid in shape and pointed at each end. One measures 40mm in length, 25mm in diameter and weighs 31g, while the other measures 38mm length, 26mm diameter and weighs 27g (**ILL. 1**). Both are oxidised with a small reduced patch, presumably a result of firing, and occur in the sand and flint fabric defined above. Clay slingshots of this type are a relatively common find on Iron Age sites (Poole 1984, 398).

Perforated clay slabs

Three perforated clay slabs were recovered, all from Late Bronze Age contexts. All three are oxidised and are in the sand and flint fabric. One example (660054) appears to be rectangular in shape (**ILL. 2**). It is irregular in thickness, measuring between 10 – 19mm, with one complete perforation 20mm in diameter and evidence of a further two perforations. There is a suggestion of a groove along one side and perforations were made pre-firing. A second example from waterhole [638008] is similar in fabric and firing, but is more sub-circular in shape and thicker, ranging from 15mm – 25mm (**ILL. 3**). Four complete perforations, all 15mm diameter and made pre-firing, and a further four partial perforations are visible. There is also evidence of a groove on one side, while the opposite side appears to be smooth. A small fragment from waterhole [551034] also seems to be part of a sub-circular perforated slab, measuring 18mm thick with a single partial perforation.

Perforated clay slabs have been recovered from Late Bronze age contexts on a number of sites in south-east England, for example Mucking and Yiewsley (Champion 1980, 237) and more locally from the lower Thames Valley at Runnymede Bridge (Needham 1991, fig. 66, C14-15), Holloway Lane, Sipson (Cotton, Mills & Clegg 1986, 48), Caesar's Camp (Grimes & Close-Brooks 1993, fig. 25), Petters Sports Field (O'Connell 1986, 60-1), Coombe Warren, Kingston Hill (Field & Needham 1986, 140) and Queen Mary's Hospital, Carshalton (Adkins & Needham 1985, figs.12-13). The sub-circular example from PSH02 is comparable to those at Queen Mary's Hospital but appears to have more perforations. A number of examples from Queen Mary's also display a notch running down one length (Adkins & Needham 1985, nos. 379, 385 & 388), as the examples from PSH02. The suggestion at Queen Mary's that as the slabs were burnt they may have been used in

kilns is an unlikely explanation for the examples from PSH02, which show no evidence of exposure to high temperatures. Alternative suggestions for the function of these slabs include cooking, ventilation (Champion 1980, 237-8) or salt production (Jones & Bond 1980, 475).

Spindle whorls

Three spindle whorls were identified, one incomplete example made from fired clay recovered from a Late Iron Age context and two late Roman examples made from shaped fragments of Roman pottery. The Late Iron Age fragment from (641041) (**ILL. 4**) is biconical in shape, similar to examples from Carshalton (Adkins & Needham 1986, fig 13).

Loomweights

Twelve loomweights were positively identified, although a much larger proportion of the assemblage was only tentatively identified as loomweights due to the fragmentary nature of the material and have not been discussed in more detail here. A full catalogue is available in the archive. A total of six cylindrical loomweights were positively identified, and with the exception of one example residual in a roman context, all come from Middle Bronze Age features. These loomweights occur in a sandy fabric with moderate amounts of flint <0.5mm – 1.0mm, and sparse amounts of flint up to 10mm, although the example from enclosure ditch [515253] also contains rare amounts of ferruginous material up to 10mm diameter. This is the only near complete example (**ILL. 5**) weighing 1376g and measuring 110mm high, 100mm diameter with a central hole 25mm diameter. A further example from waterhole [559328] was approximately 25% complete and measured 100mm diameter with a central hole of approximately 20mm diameter.

A further six examples of triangular loomweights were recorded from Iron Age and early Roman contexts. No complete examples were found, although a fragment representing c.25% of a particularly large weight was recovered from (677031) (**ILL. 6**). Two examples displayed perforations near the apex of the triangle.

A broad progression from cylindrical loomweights in the middle Bronze Age, to pyramidal weights in the late Bronze Age and triple perforated weights in the Iron Age has been suggested (Needham & Longley 1980, 411) and this may be visible at PSH02, in that cylindrical weights would appear to be confined to the middle Bronze Age period with triangular loomweights from Iron Age contexts. However given the small sample and general fragmentary nature of the assemblage this is a somewhat tenuous suggestion.

Miscellaneous object

A fired clay object was recovered from ditch [539283]. This appear to be a hard fired ball of clay weighing 208g, with common, moderately well sorted flint inclusions <0.5mm – 3.0mm. The function of this object is unclear.

Structural clay

Although daub may be expected to form a significant proportion of the assemblage, very little actually displayed the characteristics of this material, such as definite wattle impressions on the interior surface and a flattened or smoothed exterior surface, with only a single large fragment (656081) displaying these characteristics. A large, uneven slab of clay from pit [568244] may also have served some structural purpose, and fragments of fired clay which displayed some burning may have formed hearth linings. Although the presence of slag on site is evidence of some metal-working there were no fragments particularly diagnostic of this activity.

Distribution of material

The quantities of fired clay from all areas was examined (see **Table 1**) but given that the vast majority of material was confined to two areas (61 and 58), it was felt that it would be more beneficial to consider the distribution of material by general chronological periods rather than by area. A very small quantity of material was recovered from the Neolithic linear monuments, with an average weight of less than 5g. A slightly larger assemblage was recovered from the Grooved Ware pits, but

again with an average weight of less than 5g, little can be said about this material. The material from early Bronze Age features was also inconclusive comprising less than 10 fragments.

Table 1: Total fired clay by area/bed

Bed/Area	Count	Weight (g)
0	52	2097
14	277	1437
15	5	19
16	14	285
17	17	64
23	2	4
24	29	515
26	4	17
27	8	45
28	4	32
34	16	200
45	2	2
47	65	1736
49	142	2161
51	78	140
52	6	62
54	30	99
58	2456	31,412
60	14	62
61	2104	29,296
72	74	749
73	64	125
75	22	59
77	26	485
91	139	1197
99	8	1452
100	49	459
42A	31	1465
67A	5	17
LFA05	5	12
TOTAL	5748	75,705

In the Middle Bronze Age there is an increase in material with over 200 fragments and an average weight of 31g. Most notable in this period is the material from waterholes, particularly [559328], from which was recovered an almost complete cylindrical loomweight. A significant amount of material was also retrieved from the D-shaped enclosure. A concentration of material in waterholes can be also observed in the Late Bronze Age/Early Iron Age period. The perforated clay slabs were recovered from waterhole [638008], pit [551034] and the horseshoe ditch [636113], with almost 40 small fragments of amorphous fired clay from pit [662035] (which also contained a PDR vessel).

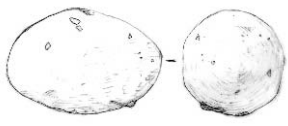
In the Middle Iron Age there is some suggestion of possible zoning of activity, with all fired clay and loomweights occurring in enclosure ditch [588260] and waterholes and pits to the west of this feature. This distribution pattern does not appear to continue into later periods. In particular a considerable amount of material was recovered from waterhole [653041] with its re-cut and associated pits and posthole, which included a triangular loomweight and a number of loomweight fragments. Throughout the Roman period the substantial fired clay assemblage is concentrated in enclosure ditches and waterholes, with no obvious spatial patterning. Although there is some suggestion with the animal bone that there may be differences between two pit clusters in the Saxon period, this is not supported by the fired clay assemblage, with similar amounts recovered from both groups. It is perhaps interesting to note the absence of annular loomweights, characteristic of this period. The small quantity of fired clay from the medieval period likewise comprised miscellaneous fragments from two waterholes [533018] and [529139], and tiny scraps from beamslots and postholes.

Catalogue of illustrated material (Fig. 1)

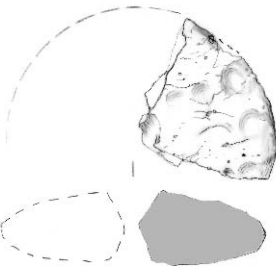
1. Slingshot, complete. Context 526436, SG 588267, ditch 588260, area 61.
2. Perforated clay slab in four fragments, three joining. Context 660054, area 58.
3. Perforated clay slab. Context 638014, waterhole 638008.
4. Fragment of spindle whorl. Context 641041, area 58.
5. Cylindrical loomweight. Context 515107, SG 515256, ditch 515253 (part of enclosure ditch: Entity 10009), area 49.
6. Triangular loomweight. Context 677031, area 58.

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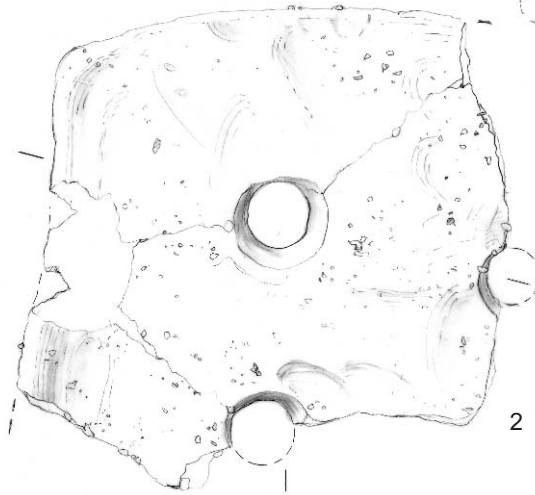


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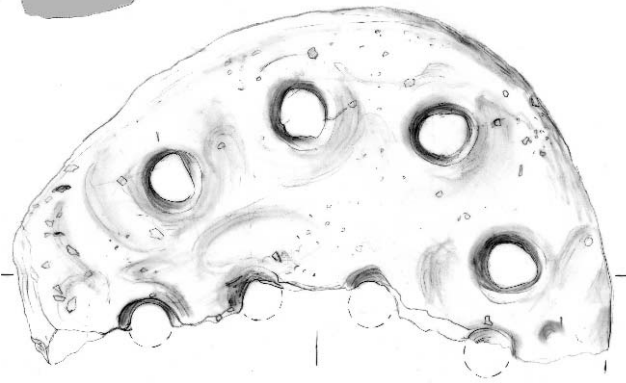


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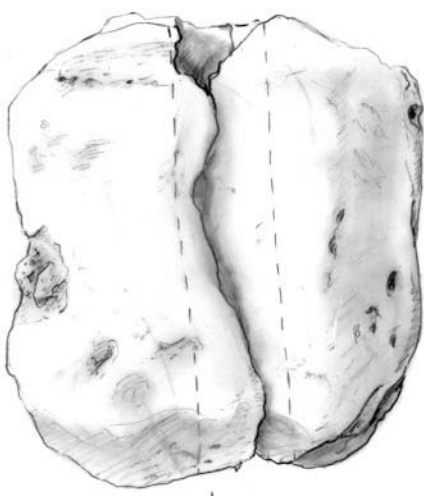
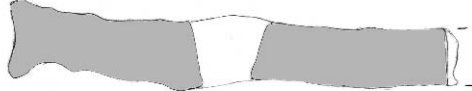
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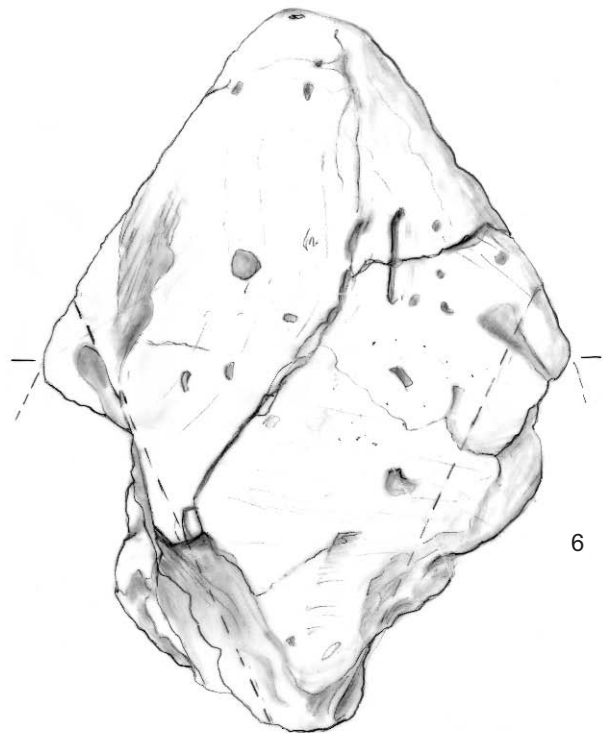
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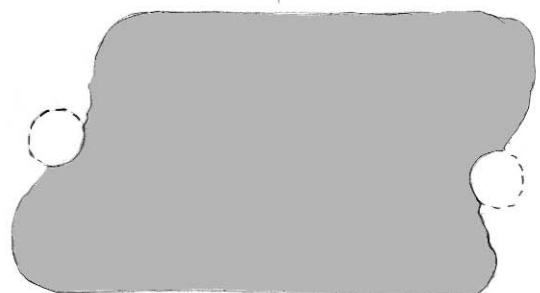
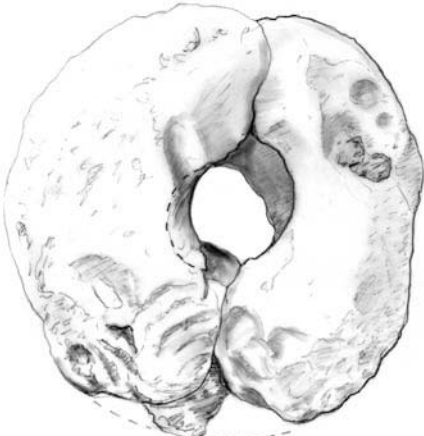
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