

HARLOW TEMPLE EXCAVATIONS 1985-1986

BUILDING MATERIALS

BRICK

All those listed below are assumed to be the standard Lydion type (30 x 40 x 4cm) unless otherwise stated. Lengths or width are only given when a side is complete. TH - thickness.

1. End fragment in orange-red ware 31cms wide, TH - 4cm. Some tooling marks on upper surface, edges have traces of hand finishing.
2. Fragment in sandy brown fabric, TH - 4-4.5cm. Edge hand finished and toolmarks on surface. One of the breaks curves evenly in and the appearance of the edge suggests it has been chipped to shape in contrast to the sharp, irregular edges pf the destruction breaks.
3. Corner fragment in buff ware, TH - 4cm. Edges badly finished, upper surface smooth with toolmarks.
4. Corner fragment in red/brown ware, badly fired with much of surface grey. TH - 4-5cm. Edges hand-finished, at one point the maker's finger has slipped and scarred the surface with the same happening more drastically underneath, possibly when it was being turned over. Tool marks survive on the upper surface.
5. Edge fragment in orange fabric with some inclusions, TH - 4cm. Tool marks are visible on the surface and the edge has been extensively pushed over with the fingers.
6. Corner fragment in badly fired dull orange fabric, TH - 3.5cm. Toolmarks survive on the smooth but undulating surface while the edges are hand-finished. Marks on the underside show where it was in contact with the edge of another Lydion before firing. One rested on the other, or vice versa.
7. Corner fragment in fine orange fabric much prone too facturing, TH - 4cm. The edges are much neater and more precise than often found. Along one edge on the upper surface are some pieces of a black substance - paint?

8. Edge fragment in orange fabric, TH - 4cm. Surface retains toolmarks and faint traces of mortar. Edge hand-finished. Mortar traces also survive on the face of a straight 60 degree break. Intentional or site damage?
9. Corner fragment in coarse orange fabric with inclusions. TH - 4cm. Edges poorly finished and traces of mortar exist on both surfaces and one edge. The upper surface has a smudged but recognisable fingerprint.
10. Corner fragment in a sandy dull red fabric, TH - 3.5cm. One edge very strongly overturned during finishing to leave a ridge some 3.5mm high. Toolmarks visible on upper surface.
11. Edge fragment in a fine brown fabric badly fired. One edge has been finished very precisely with a tool. 6mm in from the edge the surface drops 1mm. TH - 3.3cm.
12. Edge fragment in sandy brown fabric. Edge and top surface meet evenly, some traces of hand finishing. TH - 3.7cm
13. Corner fragment in buff fabric. TH - 4cm. Generally poor finish with fingermarks on surface.
14. Corner fragment in dull orange fabric, TH - 3cm. Edges neatly finished and curved toolmarks on upper surface.
15. Roughly made corner fragment in sandy fabric fired to a dark grey. The overfiring reached such an extent that along at least one edge the silica fused into a crude, grainy glaze.
16. Corner fragment in dull orange ware with grey surfaces. TH - 4cm. The edges are finished fairly level and the corner has been partly rounded. At the end of one side the clay has been forced proud of the surface to form a crude boss. This may have been deliberate in order to aid keying or the result of careless handling.
17. Edge fragment in sandy dark brown fabric. The edge has been hand-finished and forced over into a ridge 4mm high and 7mm wide. The lower edge has been treated in a lesser manner giving the edge a somewhat convex profile. TH - 3.5cm.
18. Fragment in red fabric, TH - 4.5cm with part of a footprint.
19. Corner fragment in fine grained buff fabric, TH - 3.5cm, with hand-finished level edges.
20. Edge fragment in orange fabric, TH - 4cm. Large amounts of cement are still present on each side.

21. Edge fragment in a dull orange fabric 27cms wide and 4cms thick. Edge hand-finished and upper surface slightly concave. Some 2-3cms smaller than the standard Lydion size.
22. Red fabric Lydion fragment, TH - 3.5cm. On the top a circular boss approx. 2cm high and 4cm in diameter has been pushed into the clay before firing. These bosses were intended to aid the keying together of these bricks when used as bonding courses. This type of brick is known as a Tegula Mammata and is not particularly common.
23. Fragment in red fabric possibly of another Tegula Mammata, though the boss is both small and a different shape. TH - 4cm. The boss is only 5mm high and approx. 2.5cms square and could have got where it is by accident as much as design. Two cuts on one side could suggest it was an intended addition.
24. Corner fragment in an unusually coarse red/brown fabric. The edge, is ~~a~~ usual rough from the mould but, unusually, the top surface has not been smoothed. TH - 4.5cm. A semicircular groove 8mm wide and approx. 5mm deep angles up from the corner at just over 60 degrees to the 'horizontal' edge. Wear patterns could suggest that the 'vertical' edge turns parallel to the groove about 6cms above the corner. The rough surface could have been left for plaster to be keyed into while the groove could also have been intended as decoration. Possibilities, part of an inscription or part of the decoration of the building.

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BUILDING MATERIALS

IMBEX

The thorough destruction of the site makes the discovery of complete tiles or even sections highly unlikely unless we find some used for drains.

1. Edge fragment in sandy orange fabric with mortar on the inside TH - 18mm. The lack of any traces <sup>outside</sup> and the size as far as can be estimated show this comes from near the bottom of the tile.
2. Fragment in red fabric with external mortar. Size and lack of internal mortar shows this is from new the top of the tile. TH - 15mm.
3. Edge and end fragment in buff fabric. The end has been crudely finished by hand. TH - 24mm.
4. Well finished fragment in fine red fabric. TH - 14mm.
5. Roughly made and fragment in dull red fabric. TH - 20-25mm.
6. Crudely finished end fragment in red fabric. TH - 15mm. Both the inner and outer surfaces overlap the edge by up to 5mm.
7. Edge and end fragment in coarse buff fabric. TH - 20mm.
8. Edge and end fragment in orange fabric. TH - 15-20mm. The general shaping and finish is poor, even by the standards of these tiles. Not only is the corner bent inwards, but it also has a crude internal boss for which these would seem to be no purpose.
9. Edge fragment in dull orange fabric. TH - 15mm. Breaks give the specimen the form of an irregular bent diamond, but probably only one of these is original. It angles outward from the edge at about 45 degrees and this may be part of one of the several shaped tiles necessary for sealing roof angles.
10. Tile. The exact purpose of these items is at present a matter of guesswork. Small piece of light buff fabric tile TH - 13mm, well finished externally with mortar on the inside.

11. Edge fragment of orange fabric tile. TH - 15mm.  
A straight possible signature groove runs at an acute angle to the small surviving piece of edge.
12. Tile in dull red fabric, TH - 18mm. The surviving edge is curved. Possibly a piece of opus sectile flooring.

#### BOX FLUE TILES.

13. Part of the side face of a box flue tile with part of the central keying hole punched out in a crude manner. Light orange fabric. TH - 15-20mm. There is a distinct edge suggesting this is a three sided tile.
14. Two angle pieces of orange fabric box flue tiles with diagonal combing. Both are heavily abraded. There is no evidence for any heating system in the temple so these items presumably came from elsewhere in the settlement.

#### BURNT DAUB

15. Assorted small fragments, none with any impressions

#### WALL PLASTER

16. 4 small fragments of wall plaster. 3 dark red, 1 pink.  
No traces of pattern.

#### FLOORING

17. Two pieces of opus signinum. Neither has any impression of tessera or tiles or any trace of finished surface.
18. Assorted red tessera. Most are cubes, one is flat, while one has a very deep thumb impression on one side
19. Two white tessera, one cut from imported limestone, the other from chalk. Both reasonable cubes.

#### MORTAR

20. Two pieces of mortar from the roof, The external and internal curvature indicates these pieces came from overlapping imbreces. The smoother finish of the concave surfaces indicates where they rested on the top of each imbrex.

21. Flat slab of mortar presumably from between the bonding course tiles, it has fractured into three pieces.
22. Two irregular lumps of mortar. The various smooth concavities left by now missing flints suggest this in from the main rubble structure of the walls.
23. Bonding course mortar.
24. Two pieces possibly from the roof structure.
25. Four pieces of pinkish mortar. Probably backing for wall plaster.
26. Fragment of coarse mortar with tile/brick impressions. The concave curve of the larger impression suggests this came from the roof.
27. Irregular triangular piece of tile, probably a tegula fragment, TH - 20mm. Amongst the inclusions is one large piece of black flint. Part of one of the edges appears to have been shaped while the upper surface seems to show considerable traces of wear. Another possible fragment of opus sectile flooring presumably dating from the first period of building. Evidence suggests that any such floor was replaced in whole or in part with simple two or three colour mosaic during the AD.200 rebuilding. (WEAG).

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ROOF TILES - TEGULA

Dimensions. Length and width are only given when a complete side is present. Flange measurements as follows: OH - outside height. IH - inside height. T - thickness. Others: TH - tile thickness.

1. Slightly upward curving tegula fragment in bright orange fabric burnt brown on the underside. Fine grained with sand and other inclusions up to 11mm. Surface heavily abraded giving the generally straight breaks a man-made look. No impressions or markings. Inside corner of flange curved. OH - 50mm, IH - 29mm, T - 23mm(max), TH - 20mm.
2. Fragment in light brown sandy fabric with inclusions of the bottom left corner of a tegula. Interlock crudely formed with prominent cut marks and clay on sloping face badly smoothed. Inward face of flange slopes out from base at about 45 degrees. No impressions or markings. Flange incomplete, no full measurements possible. TH - 22mm.
3. Tegula flange in light brown fabric with few inclusions. Inside face has bear tooling marks. OH - 52mm, IH - 35mm, T - 18mm.
4. Top left hand corner of a tegula curving up towards the top edge and in towards the centre. Sandy orange fabric with inclusions and badly fired. Flange interlock damaged. Tile generally crudely formed with finger impressions on the flange edge. OH - 44mm, IH - 32mm, T - 12mm, TH - 14mm (edge), 12mm (break)
5. Top left hand corner of a tegula in fine orange fabric with some inclusions. Very little of the flange survives, T - 15mm. TH - 23mm. The surviving edge is somewhat uneven due to distortion caused by ~~marks~~ marks made with a small stick or similar object. These depressed part of the surface and some finger work and tool work was necessary to try and correct it. Three deep cuts have been made into a previously modified part of the edge and have lengths of 14mm, 19mm, and 13mm. This is presumably some sort of batch mark. Faint traces of mortar still adhere to the surface.

6. Top right hand corner of a tegula in dark red fabric with inclusions. Part of the underside and the outer side of the flange have been smoothed while the inside edge has deep tool markings. The interlock has been cleanly knife trimmed with the vertical face cut back slightly. OH - 50mm, IH - 24mm, T - 16mm, TH - 27mm(max). From 115mm along the edge a straight break extends to 200mm along the side. What appear to be faint traces of mortar are adhering to the face of this break. The ambulatory roof of the temple would have needed a large number of cut tiles to complete the angles at the four corners and the angle with the porch roof to say nothing of the cella roof angles if that was also hipped rather than gabled.
7. Fragment in gritty orange fabric with inclusions badly fired. Top and side surface finish good. OH - 41mm, IH - 23mm, T - 17mm, TH - 18mm.
8. Badly finished piece in orange fabric with irregularities in the clay and many inclusion cavities and gas cavities. Inside join of flange to base a pronounced concave groove possibly done with a finger. A curved cut in the top of the flange was made during final trimming and not smoothed out. OH - 47mm, IH - 25mm, T - 41mm. The upper edge of the flange is slightly convex. TH - 22mm.
9. Crudely made fragment in buff fabric. The surviving part of the flange was badly made. The section shows that an insufficient amount of clay was first put into the mould. A second batch was put in and the tile moulded. At this point the flange was still badly formed and the potters thumb marks can be seen where he pushed the two areas of clay together but even then the height of the flange was hardly sufficient so no attempt was made to trim the ragged edges. OH - 47mm, IH - 24cm, T - 15mm, TH - 30mm (approx.). Parts of the break are covered in mortar which suggests that transport to the temple or handling on site proved to much and so the fragments were used in the walls.
10. Fragment of bottom left corner in dull orange sandy fabric with some larger inclusions. Tool marks on the inside face of the flange and an irregular groove along its base. Only a small part of the interlock survives with pronounced tool marks. OH - 53mm, IH - 27mm, T - 36mm, TH - 26mm
11. Fragment of bottom right corner in a red gritty fabric. Heavily abraded but general standard of flange and interlock finish poor. Flange top irregular due to inadequate finishing of second layer of clay. Inside edge curves smoothly round to the base. OH - 42mm, IH - 23mm(approx), T - 27mm, TH - 17mm.



12. Top right hand corner in pinkish fabric with inclusions and cavities. Interlock well cut with vertical face sloping backwards. Thickness of flange top decreases from 16mm at interlock to 9mm at break. OH - 38mm, IH - 25mm(approx), TH - 16mm. Faint traces of mortar remain on top surface.
13. Small fragment in buff fabric, TH - 25mm. One of the breaks is across a carefully formed nail hole with a top diameter of 15mm narrowing down to 11mm. On both sides of the tile clay has flaked away from the surface as a result of the drilling.
14. Bottom left hand fragment in orange fabric generally fine grained with a few large inclusions. Underside has been smoothed and extensive tool marks survive including one rather deep jab. The flange has signs of smoothing, probably with the fingers, and widens as it extends away from the interlock. T - 25-30mm, OH - 53mm, IH - 35mm, T-24mm. The inside top edge of the flange is rounded and distinct tool marks also survive on the partly smoothed outer face. Small fragments of mortar still adhere to the upper surface.
15. Irregular fragment in dull orange fabric with some as yet unidentified prints possibly of a small deer. The shape and angles of the prints suggest either a change in direction or more than one animal. TH - 30mm.
16. Bottom left hand corner fragment in gritty dull orange fabric. The interlock is crudely finished as is the flange who's top surface has a pronounced inward slope. OH - 44mm, IH - 15mm to start of slope. T - 21mm(approx), TH - 19mm. The two breaks have cut across possible nail holes. The one at the bottom right does not piece the tile and could be a destruction chip. The one on the top break looks crudly formed and it appears that a large lens of clay flaked off the underside possibly making the resulting hole to large to use. Its diameter cannot be established.
17. Irregular fragment in dull orange fabric 16mm thick. Section of circular finger impressed markings survive in the form of parts of three concentric circles. Such marks on the top surface of a roof tile would seem to have no practical function and would seem too faint to be decoration. Possible trade mark or signature.
18. Bottom right hand corner fragment in orange fabric with inclusions. Top surface has flaked off but flange generally well finished. Neatly squared on outside. Inside edge curved at top and side pushed in possibly with the finger. OH - 54mm, IH - 30mm, T - 35mm, TH - 24-20mm. Underside smoothed off.

19. Fragment in dull brown sandy fabric generally well finished on all sides. Inside face of flange concave in lower half, convex in upper. OH - 55mm, IH - 28mm, T - 22mm, TH - 23mm.
20. Fragment in brown fabric with faint tool marks and slight mortar traces. Underside partly smoothed. TH - 25mm.
21. Badly deformed and overfired top left corner fragment in dark brown sandy fabric. General finish crude. TH - 21mm.
22. Dull red signature fragment. Pattern is in the form of at least four concentric circles probably finger made. TH - 16mm.
23. Irregular and badly finished fragment in fine brown fabric. Upper surface has the remains of two fingermarks. TH - 22mm.
24. Fragment in fine light orange fabric. The straightness of three of the breaks suggest this may have been cut for re-use. Could have originally been a triangular piece 10cms wide at base and 20cms high to apex. TH - 22mm. Possible floor tile? Evidence from the stone so far recovered from the site suggests the presence of stone slab paving to which tile would provide a pleasant contrast and a simple and cheap means of achieving a pattern resistant to heavy ware. Opus Sectile floor type - Fishbourne Vol. II p.33
25. Bottom left-hand corner flange fragment in sandy dull orange fabric badly fired. Generally well finished, inside top edge rounded. OH - 47mm, IH - 29mm, T - 15mm, TH - 14mm.
26. Top left hand corner fragment in fine orange fabric with some inclusions and airholes. Interlock crudely cut with vertical face sloping down and out and horizontal face starting approx. 3mm above tile surface and sloping down to outside edge. Flange widens and slopes down as it extends down the tile. OH - 45-40mm. IH - 25mm, T - 20-30mm, TH - 22mm. Some tool marks and traces of hand finishing.
27. Fragment in light orange fabric with innumerable airholes. All surfaces finished including all unflaked area of base. Flange rounded on both edges with partial finer groove marking join with surface. OH - 57mm, IH - 35mm, T - 28mm, TH - 24mm(approx).
28. Fragment in fine brown fabric with a generally poor finish. The edges of the flange have been finally formed by hand. OH - 40mm, IH - 19mm, T - 21mm, TH - 22mm(approx.).

29. Fragment of bottom right hand corner in red fabric with generally poor finish from WEAG excavation. OH - 35-45mm, IH - 25-30mm, T - 20mm, TH - 20mm (approx). Lumps of mortar survive on the flange whose inside edge has a pronounced curve and a deep concave groove for the edge of the imbrex at its base. Outside face and top edge of the flange very crudely finished with a knife or similar implement. The broken edge of the tile parallel with the flange is straight and slopes at about 45 degrees and has what appear to be faint traces of mortar on the face of the break. The other breaks may also be deliberate.

HARLOW TEMPLE 1987. MANUFACTURED BUILDING MATERIALS.

- B.1. Part of a tegula with left hand flange, 33 x 26cms.  
Found laid in the construction tipping levels inside building J.
- B.2. Part of a tegula with right hand flange, 23 x 16cms. Found as B.1.
- B.3. Example of cement from wall with tile/stone impressions.
- B.4. Deeply cut box flue tile fragment.
- B.5. Box flue tile fragment.
- B.5a. Lydion Brick. Width 31.5cm, surviving length 31.5cm, thickness 4-5cm.  
Some finger and nail marks on edge.
- B.6. Brick, large corner piece, sides 29 and 25cms. Thickness 3.5cms.
- B.7. Lump of cement probably from wall construction. Two flat faces meeting  
at approx. 60°. One face smoothed with impressions of 2 ?bricks.
- B.8. Mortar with imprint of top of tegula flange.
- B.9. Mortar with imprint of imbrex.
- B.10. Mortar with imprint of imbrex.
- B.11. Combed flue tile with side of keying hole.
- B.12-16 Fragments of combed box flue tile.
- B.17. Uncombed box flue fragment with curved corner.
- B.18. Imbrex fragment with fingerprints.
- B.19. Opus Signinum - possible piece of moulding.
- B.20. Opus Signinum fragment.
- B.21. Mortar from roof construction. Part of the filling between imbrex  
and tegulae at the bottom end of a row. There is no evidence for  
any form of artefix.
- B.22. Wall construction cement.
- B.23. Thick slob of cement, top and bottom flat and top surface worn smooth.  
Flooring.
- B.24. Part of the end of an imbrex decorated with wavy lines running along  
the length of the tile.

- ~~CONFIDENTIAL~~
- 75 HMB 10796 - Sandstone altar w/  $Ca^{14}$  . 0.2% Natural Sand of Wall.
  - 87  $\triangle$  (SS) late (1st) rubble rubble make-up.
  - 35 HMB 12256 350 AD + Dugg of L.S. face -  $Ca^{14}$  distributed
  - 93 HMB 12255 AD 350 +
  - 37 HMB 12254
  - 02 HMB 12251 HMB backfill m  $Ca^{14}$
  - 93 HMB 12241  $\triangle$  INSCRIPTION. AD 350 +
  - 178 (2nd - also lower cobbles.
  - 554 C3rd backfill of boundary trench.
  - 140 (2nd?)
  - 54 C1/C2 mt. - loam
  - 143 Bronze Age?
  - 615 Tile dump - ? late.
  - 548 make-up level -  $Ca^{14}$ ?
  - 621 late Antonine hpt? loam layer below with cobble phases.

not associated with  $Ca^{14}$  dent.

Much: 1st

Helen Carpenter Asst Colquhoun Office - Virgin Services  
 Holly Holyfield Hall Fountains,  
 Stubbin Hall Lane,  
 Holyfield, 0992.893345  
 Walsh Aply  
 Eves EN9 2EH

ROMAN TILE FROM HARLOW TEMPLE

1985  $\approx 2.6$ ..... roof tile floor tile tesserae

687.28k 463.5 K 36.38 K  
(.675 of ton)

Estimated Total roof tile weights. (Cells, Ambulatory, Flanking Buildings, Forebuildings + Porch)

Tegula 34,000 K

Imbrex 16,700 K

50,740 K (approx 1.4% recovered 1985/86.)

(approx 50 Tons)

Rough estimate assuming minimum angle of slope.

No allowance for antefixes etc.