

LAMBETH PALACE, LONDON

D.F. Williams, Ph.D.,

(DOE Ceramic Petrology Project)

Department of Archaeology, University of Southampton

AM Lab. 801342 (MT1-9: '1490') and 'Boat Slipway' ('c.1430')

A number of small samples of mortars from Lambeth Palace were submitted for examination in thin section under the petrological microscope. The primary object of the analysis was to see if any of the mortars contained 'Trass', a natural pozzolanic material with especial hydraulic properties, known to have been imported to Britain from Germany via Holland during the sixteenth and seventeenth centuries (Savoy, 1961).

Thin sectioning of a sample of mortar from the 'Boat Slipway', c. 1430, and two from Norton's Tower, 1490 (MT3 and MT6), did not reveal the presence of any volcanic material indicating the use of 'Trass'. Instead, the main constituents of all three samples of mortar are made up of an aggregate of frequent ill-sorted subangular quartz grains, up to 3.60mm across, limestone and a scatter of green glauconite, set in a binder of lime. In addition, the sample from the 'Boat Slipway' also contained a fibrous mineral, possibly artificially produced, which has not been identified. The remainder of the mortar samples were unconsolidated and therefore not sectioned. They were instead viewed under the binocular microscope (x40), where again no evidence of volcanic material could be found. Indeed, all the samples looked remarkably similar.

Nothing seen under the petrological or binocular microscope

indicates the presence of 'Trass' in the mortar submitted. Instead, the occurrence of glauconite might suggest a fairly local source for the materials used in the mortars, since it is known to be present in the London Basin (Milner, 1962, 112). However, glauconite is also commonly associated with limestones and is especially abundant in Greensand Beds, so a source further afield is possible.

Bibliography

Davey, N. (1961) A History of Building Materials (London, 1961).

Milner, H.B. (1962) Sedimentary Petrography (London, 1962).

LIST OF TECHNOLOGICAL SAMPLES SENT TO THE ANCIENT MONUMENTS LABORATORY

Please contact Leo Diek (01-734-6010 x 529) or Justine Bayley (x533) before you excavate or at least while you are excavating. We need to see structures in situ and can usually arrange to visit at short notice.

SITE: LONDON
LAMBETH PALACE
MORTON'S TOWER
COUNTY: G.L.C.
PERIOD: "1490" []
GRID REF
EXCAVATION DATE: July 80
SHEET NO 1
DATE SENT DIRECT (LB) 19.7.80

EXCAVATOR'S NAME, ADDRESS AND TELEPHONE NUMBER FOR FUTURE COMMUNICATION.
ROBIN DENSEM Southwark & Lambeth Archaeological Projects

MATERIAL: Please complete a separate sheet for each category plugging the appropriate material(s).

RAW MATERIALS	Clay/Coal/Ore/Sand
STRUCTURES	Furnace/Hearth/Kiln/Oven/Tank
CRUDE PRODUCTS	Bloom/Emmel cake/Glass bun/Ingot/Pig
WASTE	Ash/Dross/Slag
BUILDING MATERIALS	Brick/Burnt daub/Floors/Mortar/Plaster/Tile
OBJECTS	(For technological examination rather than conservation)
VESSELS ETC	Alcubic/Crucible/Palette/Polisherds
OTHER MATERIALS	Char/Food residue/Pigment/Other

Please send these lists to RECORDS OFFICE, ROOM 522, FORTRESS HOUSE, 23 SAVILE ROW, LONDON W1X 2HE, under separate cover. Boxes should be labelled ON THE OUTSIDE with site name and contents and should contain identification label.

WORK CANNOT BEGIN UNLESS LISTS ARE RECEIVED

Excavator's No Separate entry for each item	ONE All Lab No for group	Full details of Archaeological and Stratigraphic context and Problem to be investigated. Please include sketch plan and section, photographs and colour slides. Location of Sampling areas (clearly marked)
MT1	801342	under top brick course of inner foundations
MT2		from top of 7021 : exposed level of brick foundations damaged at some later date
MT3		coherent fragment of top of 7021, including some "MT2"
MT4		from recently sampled angle at jctn, 7021/701
MT5		under 2nd brick course N face of offset 7014
MT6		brick floor 7015 (by offset 7014)
MT7		" " 7019 (by drain 7020)
MT8		exposed surface of "brick culvert" covering drain harder mull. (SW end under brick)
MT9	↓	As MT8 : softer mull. (centre, tile)
"PASS" is 20% zirconium mull. d in lower brick wall & ad. for structural concrete		Tower foundations (MT1-3) overlie drain (MT8,9) and appear to be (visually) related to offset (7014) & ? Drain (MT8,9) appears to be set in different mortar from drain above - this should be confirmed, especially!