ANCIENT MONUMENTS LABORATORY

REPORT
2470

SERIES/No	CONTRACTOR
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TITLE	Gryme's Dyke, Colchester. 10 BC to 43 AD. The base of the rampart

GRYME'S DYKE-------COLCHESTER.

10 B.C. to 43 A.D.

THE BASE OF THE RAMPART.

REPORT SENT TO PHILIP CRUMMY,

COLCHESTER ARCHAEOLOGICAL TRUST.

GRYME'S DYKE----COLCHESTER

Gryme's Dyke is a rampart built in 10 B.C. (see fig. 1). The rampart overlies material called coverloam. The origin of this material is in question, although it is thought to have originated by wind deposition. The purpose of this report is to investigate the material immediately beneath the rampart, in order to ascertain evidence of soil formation in the coverloam prior to its construction. Following a site visit, a monolith was sent to the Institute of Archaeology, London, for analysis. (see fig. 2).

DESCRIPTIONS

Layer 1). Strong brown (7.5YR 5/6) sandy loam. Stones and pebbles 80%. Stones up to 6cm. diameter. Structureless, roots common.

2(. Brown (10YR 4/3) loam. Very thin, less than ½cm. and very sparsely distributed.

3). Reddish yellow (7.5YR 6/6) sandy loam with a poor coarse subangular structure. Firm consistency when wet. Stones 15%.

4). Reddish yellow (7.5YR 6/6) sandy loam. Stones and pebbles 85%. Very poor, fine subangular structure. Weak consistency when wet.

5). Reddish brown (7.5YR 7/6) sandy loam. Stones 15%. Coarse blocky structure. Moderate consistency when wet.

ORGANIC MATTER AND pH VALUES.

	Organic matter (mgs./100gms.)	pH
Layer 1	37	5.5
2	61	-
3	44	5.7
4	29	5.3
5	18	5.2

N.B. The pH value of layer 2 is absent due to the small amount of material available for analysis.

DISCUSSION

Layer 2 contains the most organic matter and represents the original groundsurface (subsequently covered by layer 1) which, due to its extreme thinness, has either been heavily compressed or removed. Layers 3,4 and 5 are progressively lower in organic matter and are rather acid in reaction. Layer 3 is relatively low in stone content and may be partially worm sorted. However, layer 5 shows a similar stone content, although, above it, layer 4 contains 55% stones. The vertical variability of the stone content may, therefore reflect the original stone content of the coverloam and not worm sorting, although it is not possible to be certain.

The texture of the profile as a whole indicates good drainage, as reflected by the strong ferric iron colours of layers 3,4 and 5. The subangular/blocky structure of these layers indicates a soil B horizon.

It is probable, therefore that layers 2 to 5 represent the A and B horizons of the original soil. The good drainage, low pH and low

organic content indicate a low base status brown earth type of soil. Also, the organic content of the A horizon (layer 2) is low relative to normal brown earth soils (brown earth soils which I have analysed contain up to 60% more organic matter). This suggests that the topsoil would have a high mineral content of low binding capacity. Such a topsoil, if vegetation was sparse, would be quite easily eroded in windy periods and thus explain its extreme thinness. However, it is not possible to be conclusive. Alternatively, the topsoil may have been deliberately removed prior to the building of the rampart or heavily compressed.

J P Taylor

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Gryme's Dyke 1977

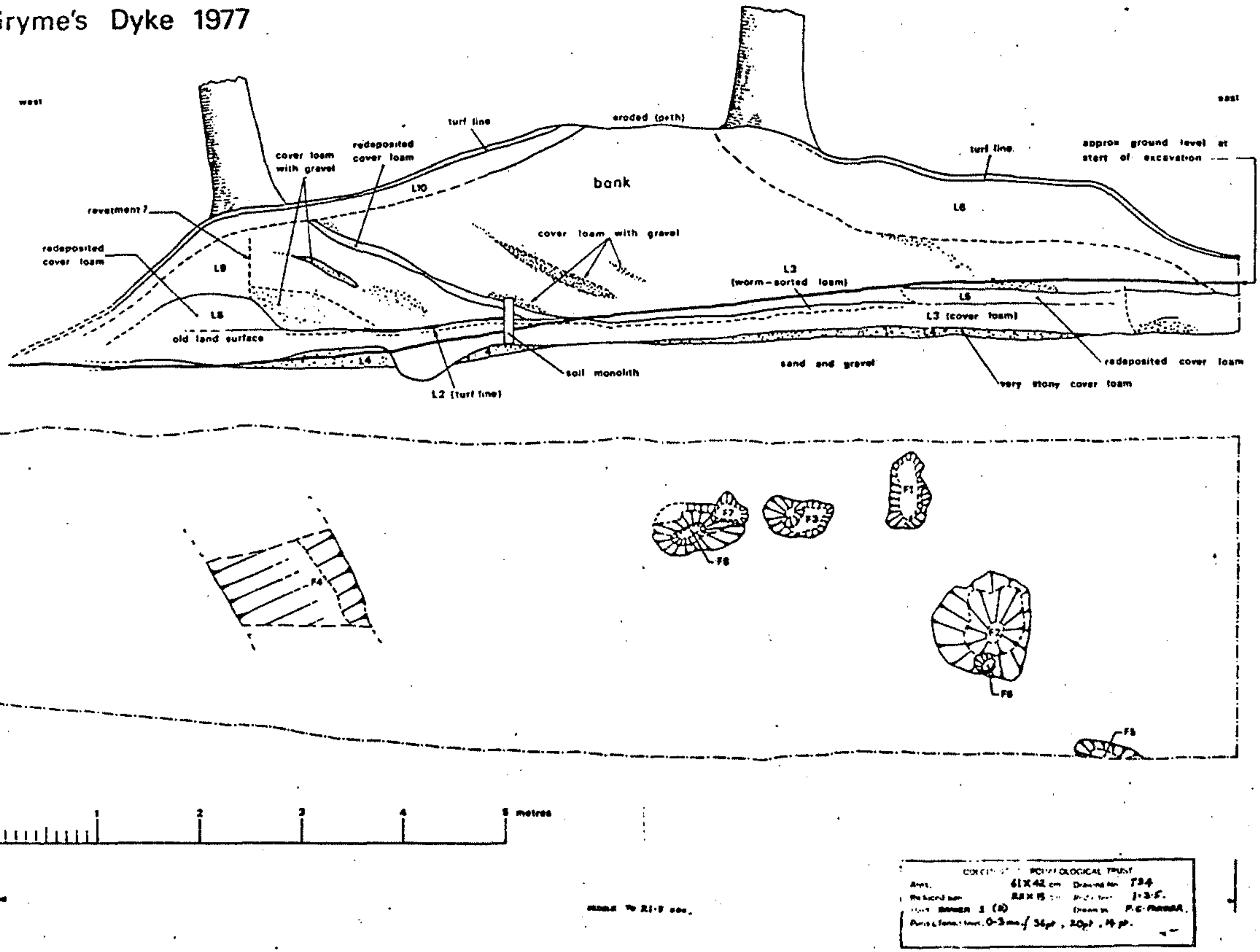
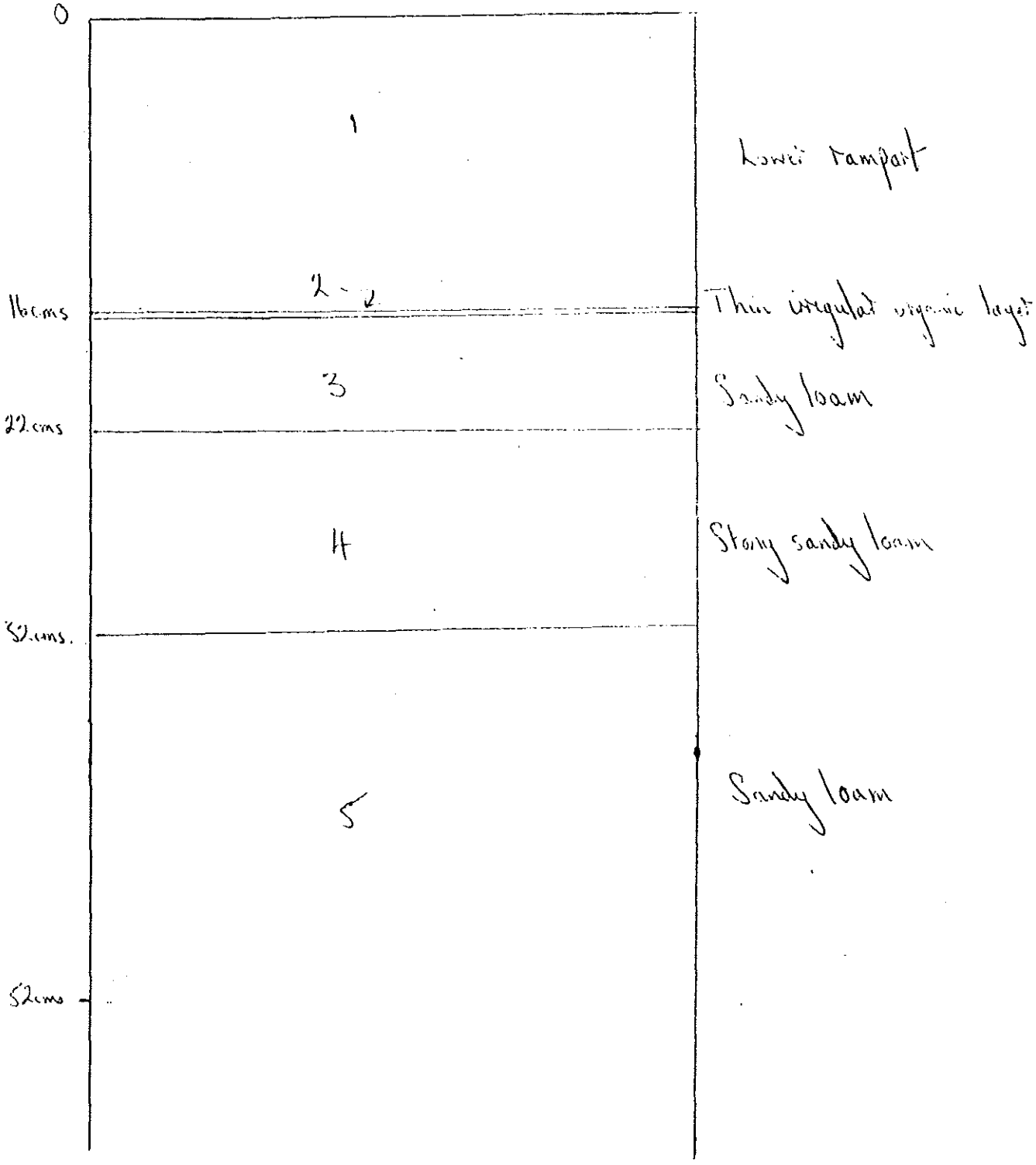


FIGURE 2


0
1
Lower rampart
2 - 2
11cms
Thin irregular organic layer
3
Sandy loam
22cms
4
Stony sandy loam
32cms.
5
Sandy loam
52cms