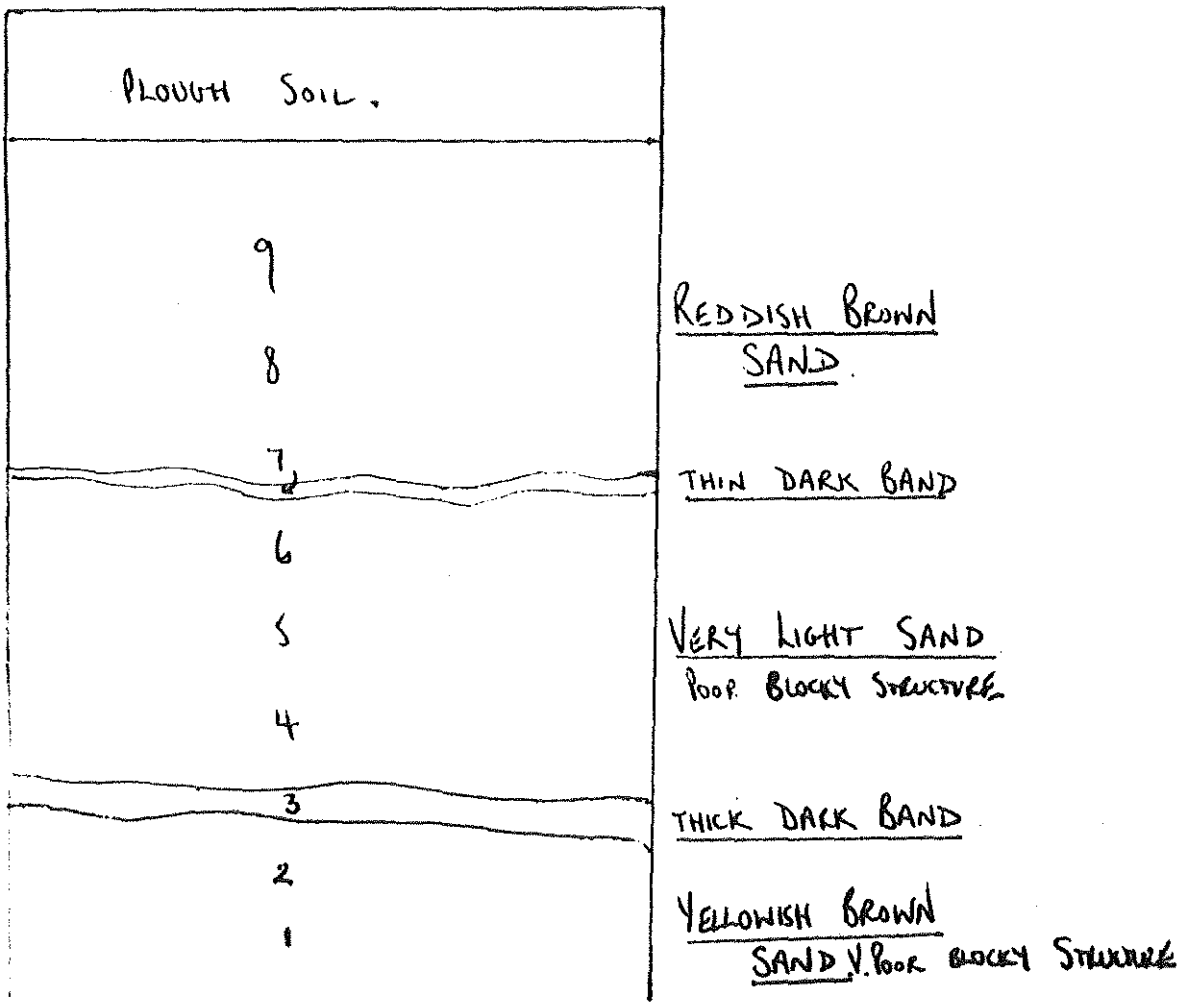
2374

Soil Report. 12/10/77. By Philip Taylor

Colchester. Director, P. Crummy.

Site Age, c. 150 A.D.

FIG. 1.



NUMBERS REFER TO SAMPLES.

SOIL REPORT-----COLCHESTER, ESSEX.

The problem was concerned with the origin of the thick dark band (sample 3). Work on adjacent sites has uncovered a former groundsurface at this level and samples were taken in order to investigate whether sample 3 was a buried surface or an in situ soil feature. Morphologically, the profile, from sample 7 downwards, bore a striking resemblance to a buried podzolic soil, although such soils are not generally found in this area.
Considering this, sample 7 resembled a thin, perhaps truncated A_1 horizon, while samples 6, 5 and 4 resembled a leached A_2 horizon. Sample 3 would thus represent a Bh or a Bh/Fe horizon with samples 2 and 1 representing the Bs horizon.
Thus, the samples (see fig. 1) were analysed for alkali-soluble humus, pH and particle size characteristics.
Table 1 shows the pH distribution of the samples. The values immediately suggest that the pH is too high to produce podzolic features. Also, below sample 4, the values decline, which is not typical of podzolic soil B horizons. Alkali-soluble humus values (table 1) also indicate that the thin dark band (sample 7) is not organic. In fact samples 5, 6, and 7 have higher humus values. However, the large increase in humus content at sample 3 indicates an organic rich layer below which humus values decrease, although they remain higher than the upper samples.
Particle size analyses show that the sand content in samples 4 to 9 does not vary significantly and the average amount of sand is 78.32%. Samples 1 to 3 have lower sand contents, the average being 60.13%. Also, samples 1 to 3 contain quite large stones up to 3cms. diameter which consist of

artz and cemented sandstone. This sandstone is probably a relict feature of a former sedimentary environment. Samples 4 to 9 contain smaller stones (up to 1½cms.) which consist only of quartz. Therefore the presence of the organic rich layer (sample 3) and the differences in physical characteristics above and below this layer indicate that a former groundsurface (sample 3) has been subsequently buried by a more sandy deposit. The sequence is not indicative of a podzolic soil and samples 4 to 9 probably represent the same deposit i.e. overburden. The dark colour of sample 7 is probably due to a high iron content which can be seen under a low power microscope. The poor structure of samples 1 and 2, which represent the lower horizons of the former groundsurface is probably due to the relatively high sand content which is a poor preserver of soil structure.

J.P. Taylor.
Inst. of Arch.

TABLE 1

Sample	pH	Humus (mgs/100grs.)
9	7.2	9.0
8	6.8	7.0
7	6.6	8.0
6	6.6	10.0
5	6.8	9.0
4	6.8	9.0
3	6.6	41.0
2	6.4	21.0
1	5.8	15.0