

6. Part of a core, later used as a hammer-stone. From A.I, Pit VII.

Many waste flakes were also recovered but only the above showed signs of secondary working. All could be of Late Bronze Age date.

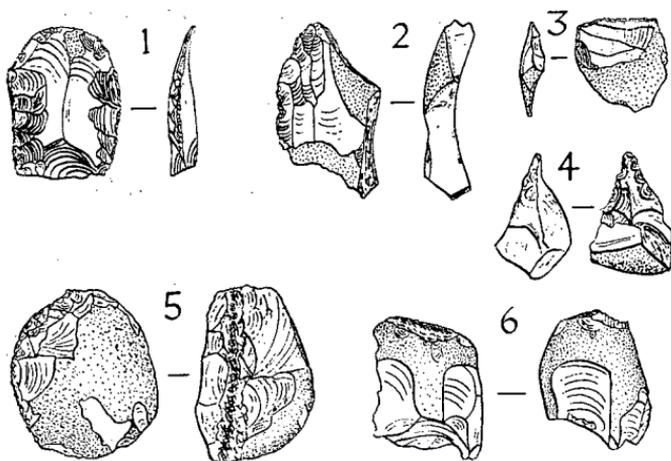


FIG. 12.—Flint implements. (½).

ACKNOWLEDGMENTS

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APPENDIX

*Brief summary of Scientific Investigations**

The basic rock is the Chalk. Some of the eastern part of Calke Wood appears to be on Boulder Clay which overlies the Chalk to the east. Almost the whole of the Wood lies on mixed deposits of sand and gravel associated with the Glacial Drift. Such deposits

are always very variable and contain an appreciable amount of altered clay yielding red- (or grey-) firing pottery. Pockets and strata of white sand are also recorded as typical. Land in this position is likely to have springs, drain more efficiently than the adjacent plateau of Boulder Clay and would therefore support vegetation better.¹

'Soil' samples were taken from a seemingly undisturbed section. These and others supplied by the excavator were examined in three ways: (1) by firing under both oxidising and reducing conditions to a dull red heat;² (2) by shaking with water and observing manner of settlement;³ (3) by measuring pH values.⁴ The results reflect the variability of the subsoil and confirm the conclusions drawn from the tests made on the pottery. In particular they suggest the following interpretation for Pit I:

The filling accumulated to some extent as a result of the sliding down, on separate occasions, of parts of the clay lining. These came to rest in each case on what was, at that time, the surface of the 'silt' at the bottom. But the principal pattern of horizontal stratification was produced by material from outside. In each case, the thickness of deposit from the bottom of one light-coloured seam upwards to the bottom of the next represents one 'silting' phase. The material was introduced, every time, into a column of standing water in the pit, high enough to permit the separation observed.⁵ It was derived from a mixture of sand (similar to A.I, 4) and loam (similar to A.I, 5/6), sorted by downwash so as to favour the lighter, silty fraction in the latter. Strata of both must have been present at that time on a slope leading to the mouth of the pit from the east.

* The full reports are in the records of the Ancient Monuments Laboratory, Ministry of Works. We are much indebted to the many specialists named below for their generous help.

¹ S. C. A. Holmes, Geological Survey and Museum.

² At the A.M. Laboratory this method is used to give a rapid colorimetric indication of the relative amounts of iron and organic matter present. The oxidising run has been adapted from the method developed by Dr. G. W. Dimpleby, Department of Forestry, University of Oxford.

³ At the A.M. Laboratory. Where separation occurs readily, the relative amounts of silt and sand provide a useful measure of comparison.

⁴ Dr. R. J. Stephenson, Public Health Department, London County Council. Average of 16 samples from sections, pH=5.1 (range 4.7-5.6), i.e. moderately acid; samples of local clay in present use: (a) (presumed) 'altered' clays, pH=5.6; (b) (presumed) Boulder Clay, pH=7.0. (Measurements with glass electrode, by method in use at Rothamsted Experimental Station).

⁵ Dr. G. W. Dimpleby.

There was evidence of 'occupation' (or debris) in Pits B.I and B.II, and possibly in (layer) A.I, 7(?). 'Clay floor' A.I, 1 probably does represent the weathered surface, later buried, of the underlying material.

Twenty-five fragments of Iron Age pottery from the site and a nearby site at Hinderclay were each divided into two pieces of which one was fired, with miniature pots made from a selection of soil samples and with flans of local clays in present use, to 1050° C in an oxidising atmosphere.⁶ All the Iron Age pottery could have been made from clays found in Calke Wood. All the Hinderclay specimens formed a consistent group which differed from the specimens found on the site, taken as a whole, though there were some similar pieces among the latter group which was not homogeneous. In this group, grit was probably added to reduce shrinkage and cracking to which local clays are prone, although satisfactory small items can be made from clays as found in the section.

Twelve small fragments of baked clay (Plate XII and Fig. 11) could also have been made from local clay. Certainly some (Nos. 1—5 and 8), and probably all of them, are parts of moulds used for casting metal with a high melting point, in many cases clearly into knives. None of the fragments give matching fits. There is evidence of split mould technique (form of pouring gate, No. 5), flat casting, possible decoration ('rib', No. 2), and possible mass production using a pattern (similarities in Nos. 1, 4 and 8). If as seems likely the heated moulds were used to obtain thin sections, the artificers must have been reasonably skilful although they clearly expected to do some hand-finishing on the castings. Bronze seems the only metal likely to have been used.⁷ No metallic traces could be found by visual or X-radiographic inspection.⁸ The clay is clearly capable of standing up to the required temperatures (around 1000° C.).⁹

L. BIEK,
Ancient Monuments Laboratory.

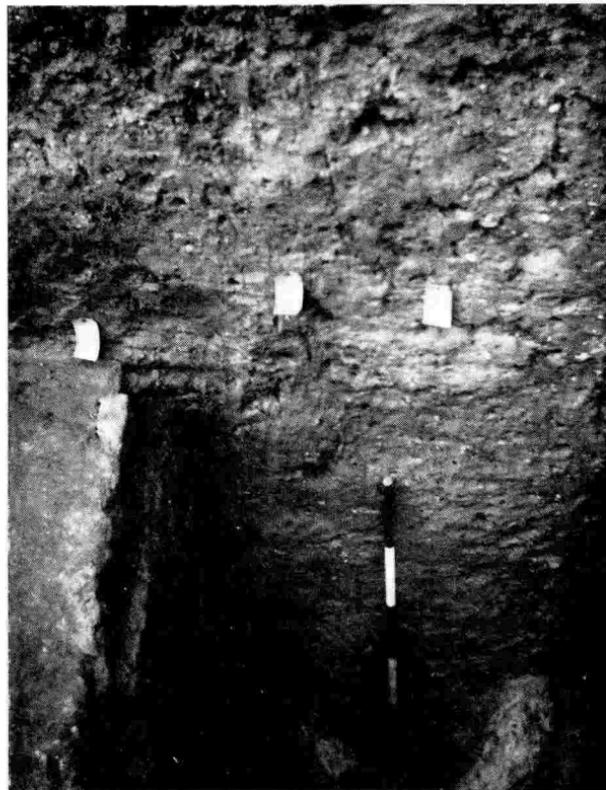
*A generous contribution from the Ministry
of Works towards the cost of printing this
paper is acknowledged with gratitude.*

⁶ F. J. Watson, Henry Watson's Potteries, Wattisfield.

⁷ Dr. E. C. Ellwood, Tin Research Institute.

⁸ At the A.M. Laboratory.

⁹ J. Shipley, School of Ceramics, Royal College of Art.

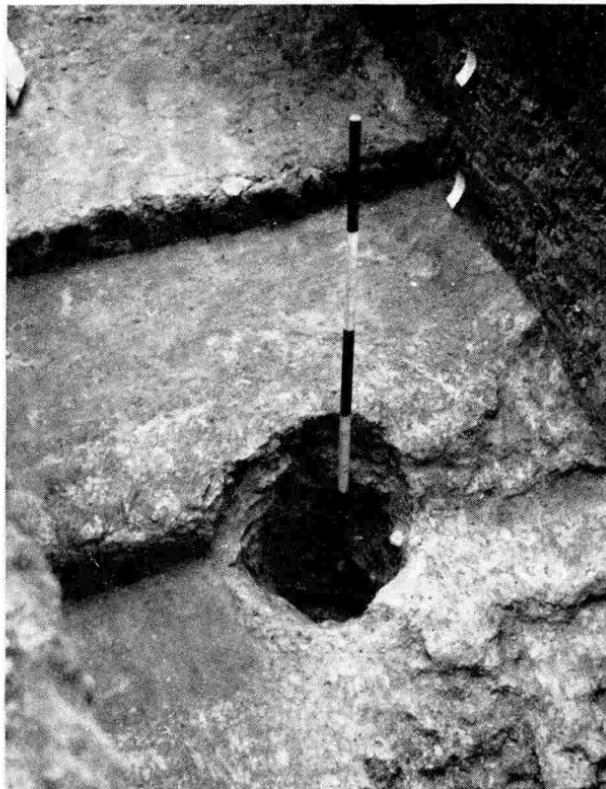


Trench A.I., Pit 1. The bottom of the clay lining for this pit shows clearly at the bottom of the photograph. The top of the pit is represented by the two labels, that on the left marking the clay lining. (p. 7).



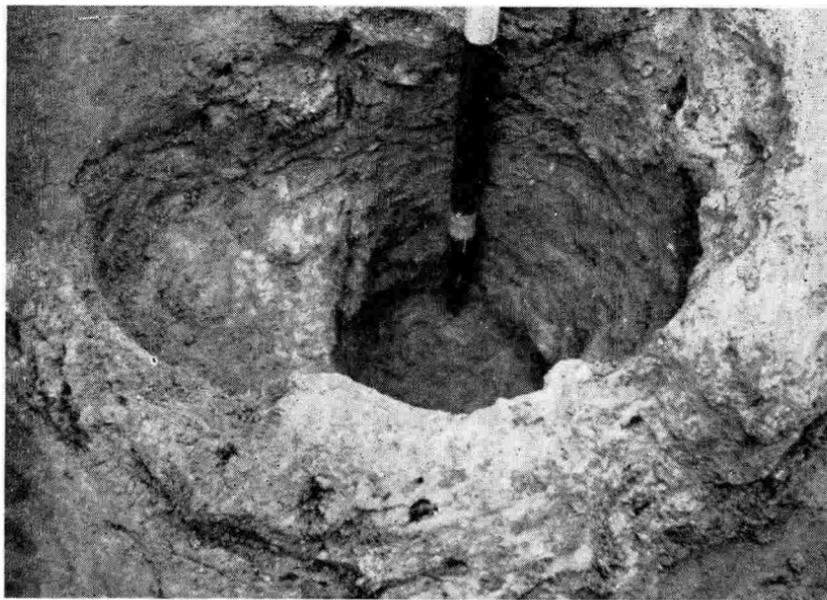
Trench A.I., P.H. II in section. The ranging pole stands on the bottom of the hole dug to receive the clay packing. The trowel marks the bottom of the earliest post hole. (p. 9).

PLATE III



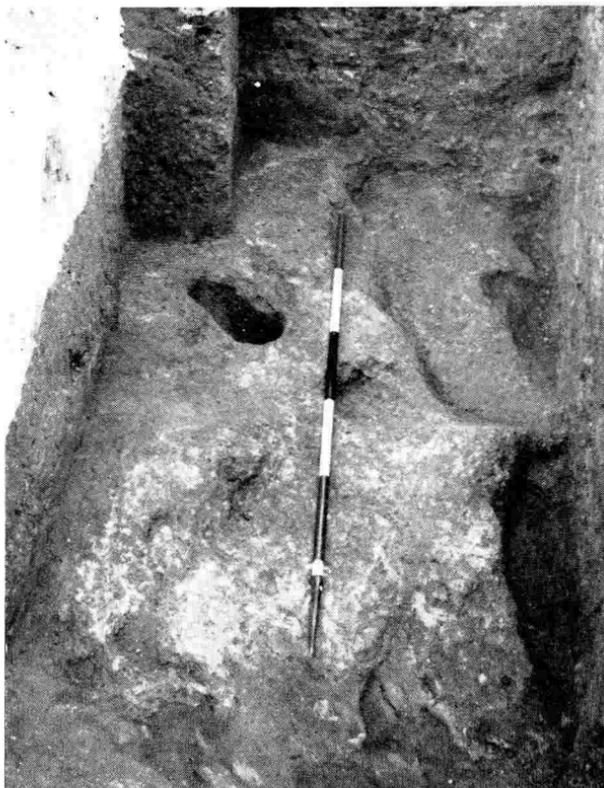
Trench A.I., P.H. III. The rough area in the foreground is probably fallen daub wall. (p. 9).

PLATE IV



Trench A.I., P.H. III. The surrounding floor has here been removed to show more clearly the clay packing. To the left can be seen the base of the socket for the later post which had cut into the packing of the earlier one. (p. 9).

PLATE V



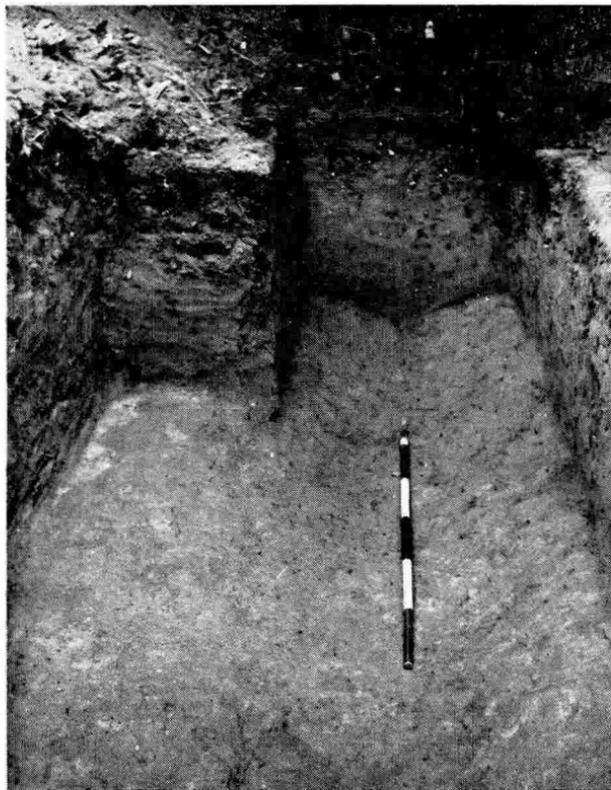
Trench A.I. Part of the clay floor of the hut with P.I. in the background and Pit X on the right. (p. 10).

PLATE VI



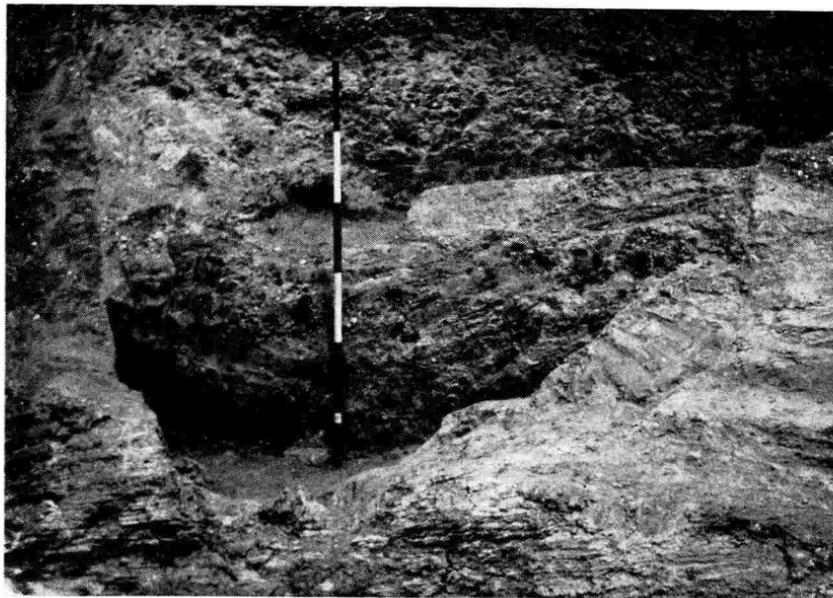
Trench A.I. The southern boundary bank of the hut. (p. 10).

PLATE VII

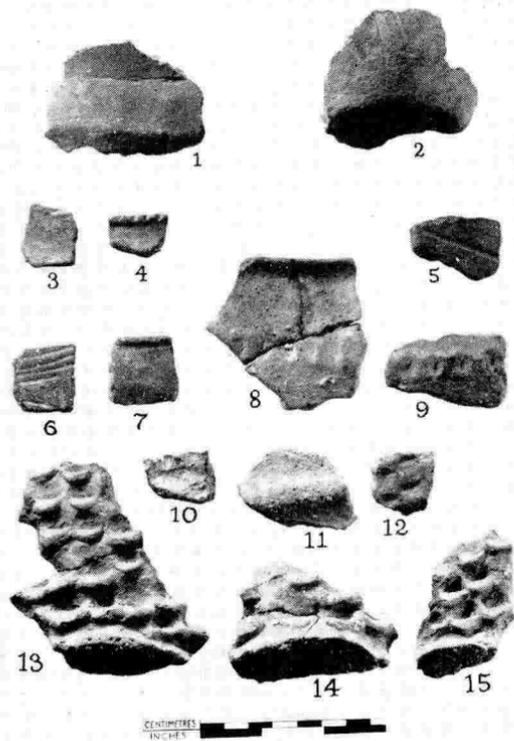


Trench A.I. The northern hollow leading into the hut area. (p. 10).

PLATE VIII



Pit B.I. in the face of the claypit. (p. 12).



Photograph, M. B. Cookson.

Iron Age pottery from previous excavations. (pp. 16-20).



By courtesy of Ipswich Museum.

Clay object from Area D. (p. 23).

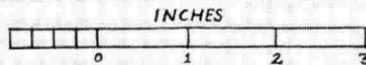
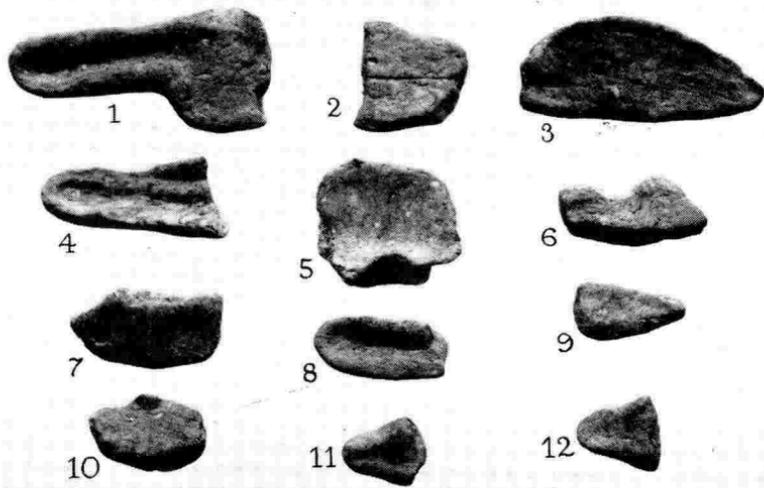
PLATE XI



By courtesy of Ipswich Museum.

Clay object from Area C. Possibly part of a triangular loom weight. (p. 24).

PLATE XII



Photograph, Ministry of Works.

Roman knife-moulds from the 4th century A.D. hearth in trench A.I. (pp. 24, 28).