

# The Origins of Cruck Construction— A New Clue

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*IN a recent article entitled 'Cruck construction: a survey of the problems', J. T. Smith used distribution maps to show that the theory of a Germanic origin for the cruck cannot be maintained, and that the evidence of cruck distribution argues strongly for a Celtic origin.<sup>1</sup> He concluded that the 'progress from ridge-posts to crucks occurred during the first four centuries of the Christian era and perhaps earlier' but had to admit that 'no cruck construction has yet been recognized by excavation in Britain'.<sup>2</sup> This paper presents details of a cruck building of late or sub-Roman date found at Latimer in Buckinghamshire, during excavations in the vicinity of the Romano-British villa.*

## THE SITE

LATIMER Roman villa stood on the S. bank of the River Chess, close to the river, some three miles SE. of Chesham (FIG. 1; O.S. 1-in. sheet 159: NGR SU 998986). The earliest occupation on the site probably belongs to the 1st century A.D. and is represented by a rectangular timber-framed building, with which no Romano-British material was associated.<sup>3</sup> After this building went out of use the site seems to have been abandoned until c. A.D. 130-140, when the villa was erected. Major alterations were made at the end of the 2nd century, and again, after a short abandonment, in the early 4th century. Later, the S. suite of rooms was apparently abandoned, the front corridor which gave access to them being blocked by a rough wall. The unheated rooms at the N. end of the main wing were also abandoned and the relevant section of corridor blocked by a thick rubble structure, possibly at the same time as the S. suite went out of use. This left a group of three rooms and the central portion of the front corridor occupied. The final abandonment of the villa building cannot, in the circumstances,<sup>4</sup> be closely dated, but the evidence suggests a date within the 2nd half of

<sup>1</sup> J. T. Smith, *Med. Archaeol.*, VIII (1964), 119-151.

<sup>2</sup> *Ibid.*, p. 141 and p. 127 respectively.

<sup>3</sup> It is ascribed to the 1st century on botanical evidence that it was abandoned not less than thirty years before the foundation of the villa (c. A.D. 130-140) and on archaeological evidence that the building did not have a long and complicated history and that the stumps of the posts were still there and had to be pulled out by the builders of the villa. Eleven small pieces of coarse hand-made pottery were associated with this building.

<sup>4</sup> Excavations in 1864 and 1910-12 removed the deposits on the top floors and failed to record in any satisfactory way which pottery came from where. During the present excavations an undisturbed deposit of this last phase of the villa's history has not yet been found.

the 4th century and perhaps even in the last quarter.<sup>5</sup> Three occupation-phases, apparently subsequent to the abandonment of the villa, were found just beyond the boundary wall of the villa courtyard, on the E. side of the site. The cruck building represents the earliest of these phases.

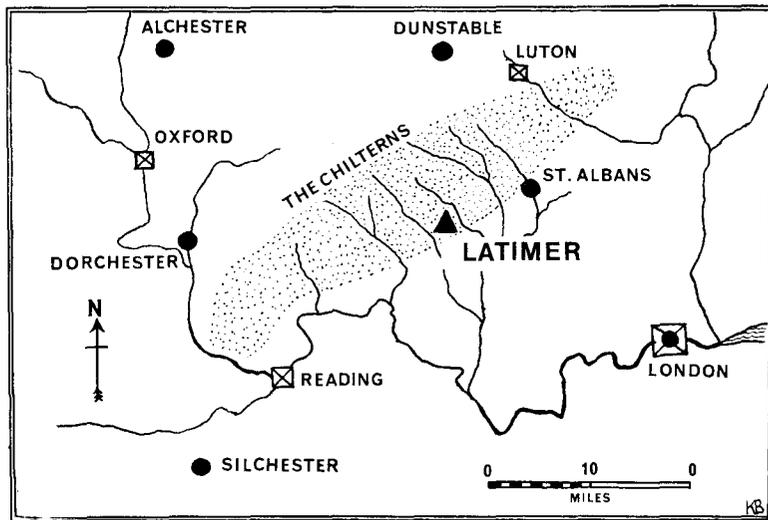


FIG. 1

## LATIMER, BUCKINGHAMSHIRE

Map showing position of Roman villa in relation to London and the Chilterns (p. 1). (Solid black circles indicate Romano-British towns.)

## THE CRUCK BUILDING AND ITS ENVIRONS

The cruck building was found some  $6\frac{1}{2}$  ft. outside the villa courtyard as defined on its eastern side by a boundary wall 2 ft. wide. It ran parallel to this wall, approximately NE. to SW. (FIGS. 2 and 3). The features of the building first appeared as black soil marks in the chalky natural subsoil, which lay 20 ft. below present ground level (PL. I, A). The cruck structure itself was represented by two parallel trenches and five pairs of post-holes placed alongside the trenches facing each other. To the south of the cruck building a series of post-holes indicated a timber-framed rectangular building apparently contemporary with the cruck structure. Along the N. side of the cruck building ran a rammed chalk roadway with flint-filled wheel-ruts. The full width and length of the road was not determined.

<sup>5</sup> In 1864 two coins of Constantine the Great were found on the floor of room 5 (*Records of Bucks.*, III (1870), 183). This part of the villa seems to have been abandoned earlier than the S. suite of rooms, suggesting, therefore, a final abandonment of the villa long after the middle of the century. Further confirmation may perhaps come from imitation samian and late 4th-century painted wares found in 1910-12. Unfortunately we cannot be sure that these were found on the floors of the S. suite of rooms, which were those excavated in 1910-12. But as only a few very small holes were dug to trace the boundary wall—where we should expect the later pottery with our three superimposed buildings—it seems very likely that some if not all of this late pottery was found within the villa.

## THE INDIVIDUAL STRUCTURAL ELEMENTS

The E. trench was designated 'A' and the W. trench 'B', the post-holes then being numbered accordingly, e.g., B<sub>3</sub>. Feature B<sub>4</sub> proved on excavation to be a later sheep-burial and thus B<sub>5</sub> was found to be the post-hole corresponding to A<sub>4</sub>, and consequently B<sub>6</sub> corresponds to A<sub>5</sub> (FIG. 3).

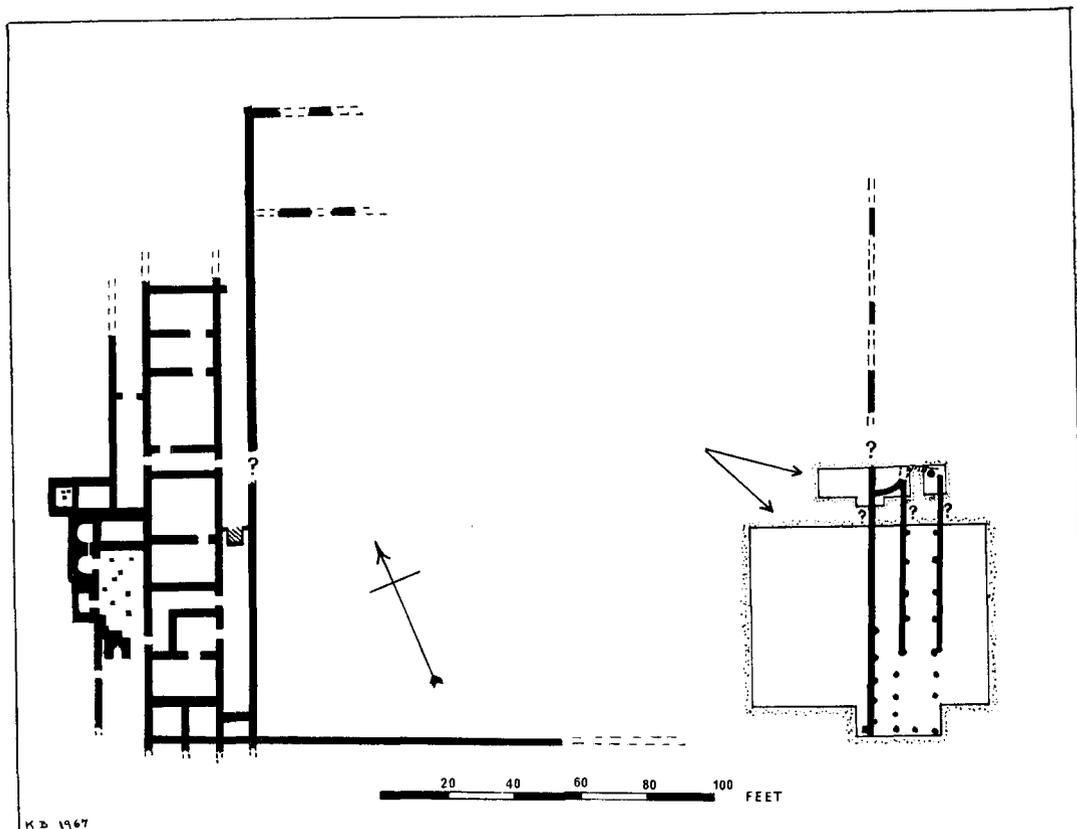


FIG. 2

## LATIMER, BUCKINGHAMSHIRE

Plan of Roman villa, as excavated up to May 1968 (p. 2). The arrows indicate the cuttings shown in FIG. 3.

*Trench A* was  $51\frac{1}{2}$  ft. long and 18–20 in. wide. Its depth varied between 12 in. and 15 in., but its bottom was always flat and its sides straight. At various points along its length the bottom of the trench was packed with flints to a depth of about 6 in. but these areas were irregular in occurrence and presented no obvious pattern. Above the flints and in those areas where there were none the filling consisted of loose black soil, pieces of flint and tile, bones, building materials, pottery and other small finds.

*Trench B* was 50 ft. long and 17–20 in. wide. Its depth never survived to

more than 10 in. but at both its N. and S. end it had been almost completely destroyed by cultivation. Like trench A its sides were straight and its bottom flat, but it contained no areas of flint packing. The filling was in every way similar to that of trench A.

*Post-hole A1.* Depth 15 in. Post diameter *c.* 7 in. The packing, of medium-sized flints, was found across the middle of the post-hole and along two sides (FIG. 4, *a*). This post-hole appears to have been recut.

*Post-hole B1.* Depth 5 in. Post diameter uncertain. No packing survived. This post-hole had clearly suffered from cultivation, as had trench B itself at this point.

*Post-hole A2.* Depth 13 in. Post diameter *c.* 8 in. The packing survived but had apparently slipped. Packing material was found only in that part of the hole adjacent to the sleeper trench.

*Post-hole B2.* Depth 9 in. Post diameter uncertain. No packing survived. This post-hole had suffered from cultivation in the same way as B1.

*Post-hole A3.* Depth 20 in. Post diameter *c.* 10 in. The packing material was found in position—a very large flint block on the E. side, adjacent to trench A, and pieces of roofing-tile along the N. and S. sides. No packing was found on the W. side of the hole facing B3 (PL. I, B; FIG. 4, *b*).

*Post-hole B3.* Depth 13 in. Post diameter *c.* 8 in. Although somewhat disturbed by cultivation, packing material was found *in situ* on the N. side of the hole, where three pieces of roofing-tile had been rammed into the ground on edge. Loose stones, apparently fallen from above, lay on the bottom and against the E. side of the hole.

*Post-hole A4.* Depth 19 in. Post diameter *c.* 8 in. The only packing surviving was part of a roofing-tile on edge on the E. side of the hole, adjacent to trench A.

*Post-hole B5.* Depth 11 in. Post, at the bottom, 5 in. square. Packing completely surrounded the post.

*Post-hole A5.* Depth 16 in. Post diameter *c.* 10 in. Packing material was found only on the E. side, adjacent to trench A (PL. I, C; FIG. 4, *c*).

*Post-hole B6.* Depth 4 in. Post diameter uncertain. No packing was found, and here again the feature had barely survived the effects of cultivation.

The survival of trench B and its associated post-holes has clearly been seriously threatened by cultivation or other levelling activities. Assuming that trench B was originally cut to approximately the same depth as trench A, we may estimate that some 8–12 in. have been removed from trench B and its post-holes. Sheep-burial B4 also showed clear signs of having been ploughed off. No floor was found within the limits of the building and this may probably be ascribed to the same cause, although it may be observed that the natural subsoil of powdery chalk would in itself have made a good floor surface, for it drains very rapidly.

#### RELEVANT ASSOCIATED FINDS

There is no need to give full details of every item found in the filling of the trenches, and those relevant to the dating of the building will be discussed below.

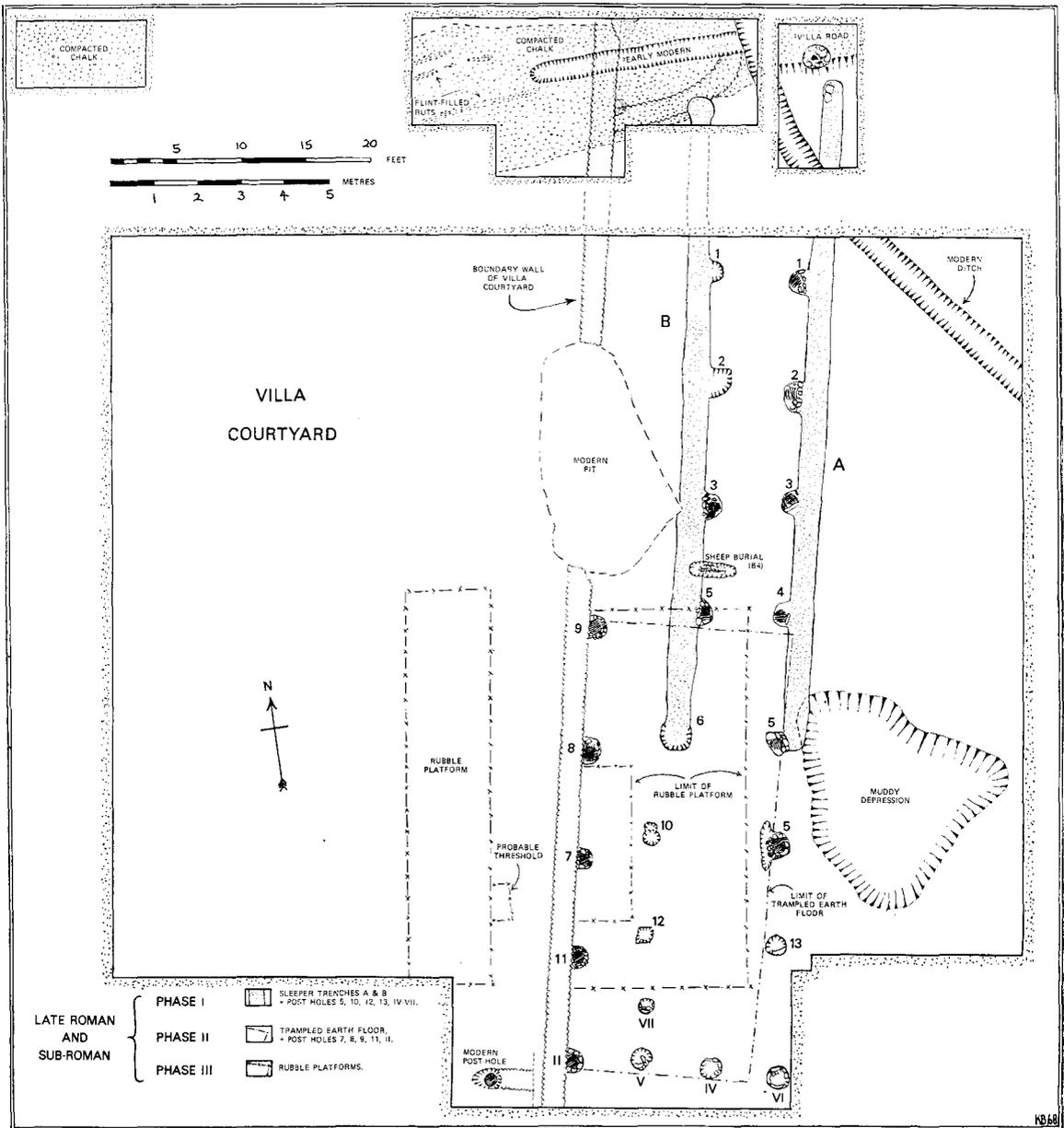


FIG. 3

LATIMER, BUCKINGHAMSHIRE

Cuttings 3-6, showing late Roman and sub-Roman features in three phases (pp. 2 f., 8); for clarity the symbols for phases II and III are omitted where they would cover features of phase I.

A few items, however, particularly metalwork, should be mentioned here, since they may have been involved in the construction of the building.

Fourteen nails were found, eight of which were fragments. All but one of the nails had a large rectangular head and most were between  $3\frac{1}{2}$  in. and  $4\frac{1}{2}$  in. long. Fragments of roofing-tile were abundant in the filling and in the rubble material above the cruck building at one end. Roofing-tiles were also used in the packing material. The filling also contained three small pieces of window-glass. Three iron objects were found in trench A. One was a large iron hook, another looked like a bit, but in fact seems more likely to be part of a chain or a wall-attachment, and the third may perhaps be compared to door-handles found at Brading Roman villa.<sup>6</sup>

### THE BUILDING—AN INTERPRETATION

There can be no doubt that the features described above represent the remains of a simple timber building which featured cruck construction. Smith emphasized that 'the cruck is the only type of roof support which, in its earlier forms, is placed immediately inside timber walls'.<sup>7</sup> This is precisely the relationship which we have in the building at Latimer. The nature of the walls is not absolutely clear. Timber walls seem certain, for the trenches are too narrow to take anything more than a stone footing. The irregular areas of flint in trench A might suggest that the walls were erected on a low stone foundation, but the absence of flints in trench B and in many parts of trench A does not support this. Furthermore, the abundance of flint on the site makes it difficult to explain the irregular patches of flints as the residue left from the activity of flint-robbers.

There remain two possible methods of wall-construction. The timber uprights may have been bedded directly into narrow trenches cut to take a whole row of them, in which case the flints may represent the remains of packing material. This interpretation, however, can be rejected on two grounds. No traces of post-holes were seen either in the filling of the trenches or cutting into the bottom of them, and the filling itself was too loose to be earth which had been packed into the trench and around the posts to hold them firmly in position. A more likely alternative, therefore, is that the timber walls were rested on narrow sleeper-beams; the shape of the two trenches does not conflict with this interpretation, and the later removal of the beams would explain how the trench received its loose filling.

The roof, as we have said, was supported by crucks 8 in. in diameter (or square), and arranged in at least five pairs. There was probably a sixth pair in the unexcavated area at the N. end of the building, just behind the entrance. This is suggested both by necessity and by the spacing of the other five pairs of posts. Two of the post-holes showed pronounced evidence of an angled post, and of those which were well preserved (posts A<sub>1</sub>–A<sub>5</sub>, and B<sub>5</sub>) all but one had the mass of

<sup>6</sup> H. F. Cleere, 'Roman domestic ironwork, as illustrated by the Brading, Isle of Wight, villa', *Bull. Inst. of Archaeol.*, 1 (1958), 61–62, fig. 6.

<sup>7</sup> *Op. cit.* in note 1, p. 134.

packing stones against the side adjacent to the sleeper-trench, presumably to counteract an anticipated outward thrust at the bottom of the roof supports. The exception to this rule, B<sub>5</sub>, survived only at its lower levels of packing and here it was found to indicate that the post had a square bottom. No other post-hole gave a clear indication of the shape of the posts, but A<sub>3</sub> might perhaps suggest a post of square section. At the S. end of the building the end wall was presumably supported by beams between posts A<sub>5</sub> and B<sub>6</sub>.

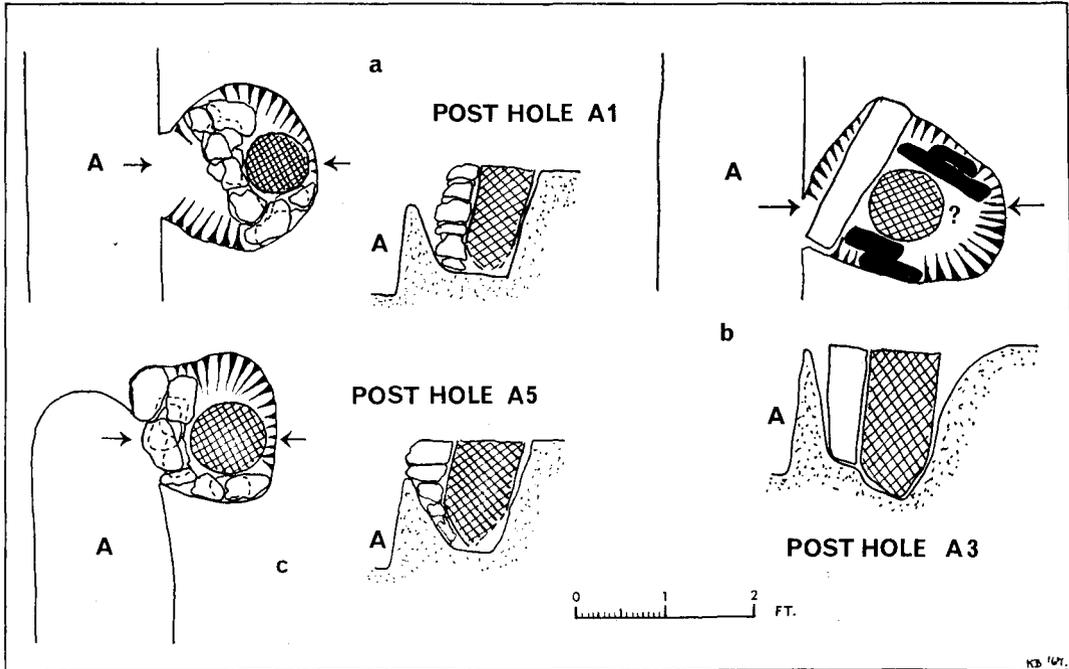


FIG. 4  
 LATIMER, BUCKINGHAMSHIRE  
 Details of post-holes A<sub>1</sub>, A<sub>3</sub> and A<sub>5</sub> in the cruck building (p. 4)

The N. end of the building may have had a door, represented by what was probably a large post situated at the end of sleeper-trench B, just in front of the hypothetical sixth cruck. Whether or not the object tentatively identified as a door-handle came from here we cannot say, but much of the filling of trenches A and B seems to be occupation-debris shovelled in from an adjacent area, possibly from within the building itself. There were no traces of internal partitions. The shape and construction of the building, however, are not suitable for a domestic dwelling and it is likely that the building fulfilled some more humble purpose. The cart-ruts in the chalk roadway leading past the door might suggest that the building was used for the storage of some commodity brought there in farm carts.

## DATING

The evidence for the date of the cruck building is provided partly by the material found within the post-holes and trenches of the building, and partly by the relationship of the building to other structures in this area. The filling of trenches A and B and the related post-holes produced a total of 102 sherds, of which thirty-six were rims. Six rims are 2nd to 3rd century in date and when compared with the other material are clearly residual sherds from an earlier period. Of the remainder eight were from 4th-century flanged bowls, four from 4th-century jars, three from Castor boxes, and one from a middle or late 4th-century mortarium. In addition there was a 'stamped' base of an imitation-samian dish together with three sherds of late 4th-century brown-painted ware. The pottery, therefore, suggests a 4th-century filling, and some distinctive pieces among the collection indicate a date in the 2nd half of the century. This was confirmed by the discovery in trench A of a large part of a small stone mortar made of Purbeck marble. Although the Purbeck marble industry is best known for its products of the 1st and early 2nd centuries, the manufacture of these small mortars is apparently confined to the 2nd half of the 4th century.<sup>8</sup> The example from Latimer is the most distant 'export' of these mortars yet discovered. Further confirmation of a late 4th-century date for the filling comes from some of the building material found in the trenches and post-holes. This included eleven pieces of wall-plaster attributable to the last phase of occupation of the villa, and three large red tesserae with cement on them, also ascribable (exclusively) to this same phase. These suggest that the trenches were filled after the villa had begun to fall into decay and its debris was spreading across the site. A *terminus post quem* for the demolition of the building is thus obtained from the filling and would seem to be safely within the 2nd half, and very probably within the last quarter, of the 4th century. A *terminus ante quem* for the demolition cannot be accurately fixed. Two structures were stratified one above the other over the S. end of the cruck building but neither can be closely dated from the associated material. The immediate successor of the cruck building seems to have been an open-sided barn, its roof supported by post-holes alongside the boundary wall (7, 8, 9, 11 and 12) and probably by a row of parallel posts standing on flint bases along the edge of a large muddy depression. A trodden 'floor' of earth and stones was associated with the posts alongside the wall and extended to the edge of the mud patch (FIG. 3). The material from this 'floor' had clearly been introduced from elsewhere and included much residual material. The latest pottery in this group were four 4th-century jars, two New Forest sherds and part of the rim of an imitation-samian dish. Lying over the open barn was a large rubble spread of regular shape, whilst a second rectangular rubble platform ran parallel some 6½ ft. to the west (FIG. 3). In the larger rubble spread were two 4th-century rims and a sherd of very coarse hand-made pottery. But there were also two coins. One was very much worn, but is tentatively identified as a follis of the middle of the 4th century, and the other, also worn and not

<sup>8</sup> G. C. Dunning, 'Purbeck marble', *Archaeol. News-letter*, March 1949, p. 15.

certainly identified, was an Æ 4, probably of Honorius.<sup>9</sup> These finds would suggest that this rubble platform was probably laid down early in the 5th century. The three stratified structures—cruck building, open barn and two rubble platforms—seemed to represent an unbroken sequence of occupation, for there was no trace of any intermediate abandonment levels. But the evidence is just not clear enough to allow us to arrive at a *terminus ante quem* for the demolition of the cruck building.

Fortunately there are several pointers to the date of that building's construction. One post hole, A2, included among its packing material a sherd of imitation samian and seven pieces of wall-plaster of the type found on the walls of the villa in its final phase of occupation.<sup>10</sup> We may therefore be sure that the cruck building was erected after the villa fell into decay. This is confirmed by the relationship between sleeper-trench B and the chalk roadway, and the villa gateway structure. The end of sleeper-trench B cuts into the gateway wall—a measure not likely to have been employed while the villa itself was still occupied, or while the gateway structure survived to any worthwhile extent. The chalk roadway runs directly over the boundary wall and gateway structure, confirming that these were no longer standing when the roadway past the cruck building was laid. However, it looks very much as if the stumps of the boundary wall and gateway structure were deliberately levelled to allow the construction of the roadway up to the end of the cruck building, for the chalk roadway was laid directly on the clean foundations of these walls: there was not the slightest trace of any soil between the two. Furthermore, the alignment of the cruck building to run parallel with the boundary wall suggests that this wall still survived above ground level, though probably in a ruinous state, when the cruck building was erected. Even after the cruck building had itself been demolished, the position of the wall was still known and used as an alignment for the posts supporting the roof of the open barn. Thus it appears that the cruck building was probably erected shortly after the villa fell into decay, perhaps during the last quarter of the 4th century. This is a conservative estimate and the building could belong to the early 5th century. It seems impossible to date it any later, however, for there is no associated material later than the late 4th century, the relationship between cruck building and villa boundary wall preclude a long abandonment of the site, and the excavations at Latimer (1864, 1910–12, and 1964–67) have failed to find any material dating between the 5th and the 16th centuries. Material attributable to the 5th century would of course be difficult to recognize in this part of the Chilterns, where the Saxons are late arrivals, but certainly there would seem to be a complete hiatus at Latimer between the 6th and the 16th centuries.

## DISCUSSION

The building found at Latimer is apparently an early example of simple cruck construction, and may on the above evidence be tentatively ascribed to the late

<sup>9</sup> These coins were provisionally identified by Dr. P. Robinson, Dept. of Ancient History and Archaeology, University of Birmingham. It is a tragedy of considerable proportions that the Æ 4 was lost without trace whilst in the post to the British Museum, where we hoped to obtain a second opinion.

<sup>10</sup> Wall-plasters from the three phases of the villa are easily distinguished from each other by variations of style, paint, and, particularly, plaster.

4th or early 5th century. If this date is correct, the building is some eight centuries earlier than the earliest cruck building previously known in this country.<sup>11</sup> The site at Latimer, and the cruck construction found on it, fall within the chronological limits suggested by Smith as the formative period of cruck construction—namely the first four centuries of the Christian era. It also falls within the geographical area covered by later cruck distribution, and crucks of later date are to be found in Buckinghamshire.<sup>12</sup> Furthermore, because the Saxons are late arrivals in the Chilterns<sup>13</sup> and there is clear evidence of continuity of occupation at Latimer and at Verulamium,<sup>14</sup> there is every reason to associate the erection of the cruck building at Latimer with native peoples. The discoveries at Latimer would therefore seem to provide a most satisfactory confirmation of the hypothesis presented by Smith.

However, the publication of the final report on the excavations at Wijster in the Netherlands reveals a group of buildings featuring cruck construction, the earliest of which are as much as two centuries earlier than the Latimer building.<sup>15</sup> The relevant buildings at Wijster are those classified by Van Es as types AIIa and AIIb. Type AIIb, appearing early in the 3rd century, is a long, narrow building with a tripartite division of the interior and two entrances on the long sides. In the living area the roof is supported on crucks. Buildings of type AIIa are similar in size and shape, but feature a bipartite division of the interior and have a doorway leading into the stalled byre as well as a pair of doors opposite one another in the long sides. Again it is the living area which features cruck construction. This type of building is rather later, appearing in the late 3rd century and being most common in the late 4th and early 5th century. It is therefore contemporary with the Latimer building. Van Es cites other examples of cruck construction in the Netherlands and north-western Germany, at Westick, Milte, Haldern, and Rhee, and suggests that this technique was developed first in Westphalia.<sup>16</sup> When he wrote, Van Es was correct in saying that 'so far there is no proof that the cruck construction was used outside the area mentioned above (Drente, Overijssel, Westphalia) before the Middle Ages', but the discoveries at Latimer have invalidated this remark. It seems that we are therefore faced with two possibilities. We might postulate that the technique of cruck construction was introduced to Britain from the continent in the late 4th or early 5th century, and that the Latimer building represents a very early example of the imported technique. There are two points in favour of this. The cemetery at Wijster produced mercenary equipment comparable with that found at Dorchester, Oxon., and on

<sup>11</sup> D. Gillian Hurst, 'Medieval Britain in 1962 and 1963. II. Post-conquest', *Med. Archaeol.*, VIII (1964), 289, fig. 94, at Gomeldon, Wiltshire. Smith refutes the 13th-century cruck construction claimed at Bramble Bottom near Eastbourne (*op.cit.* in note 1, p. 136).

<sup>12</sup> R. Comm. Hist. Mon., *Bucks.*, II (1912-13), illustration facing p. 224.

<sup>13</sup> See J. F. Head, *Early Man in South Buckinghamshire* (1955), map VIII; also *id.* in *Records of Bucks.*, XIV (1941), 338, and *Records of Bucks.*, XVI (1959), 291 ff.

<sup>14</sup> S. S. Frere in *Antiq. J.*, XXXIX (1959), 10-11, 19 ff.

<sup>15</sup> W. A. Van Es, 'Wijster: a native village beyond the imperial frontier 150-425 A.D.', *Palaeohistoria*, XI. See also the review of this book by F. H. Thompson in *Med. Archaeol.*, XI (1967), 324-6. I am indebted to Mr. Thompson for bringing this report to my notice.

<sup>16</sup> Van Es, *op.cit.* in note 15, pp. 395-6.

other sites in the SE. midlands, and thus provides a link—however tenuous—between the focus of continental cruck distribution and southern England.<sup>17</sup> Architecturally the Latimer building may be related to the cruck buildings at Wijster principally by its size and proportions, but also perhaps by the timber building situated just to the south (FIG. 3). In size and structure it compares well with several of the so-called ‘six post granaries’ at Wijster<sup>18</sup> and it could be argued that at Latimer we have not one but two ‘imported’ buildings, in the sort of relationship to each other in which they are found at Wijster.

However, the Latimer cruck building differs from the Wijster crucks in two important respects. It shows no traces of internal partitions, entrances on the long sides, or individual stalls; in other words there is no reason to think that the Latimer building served as both dwelling-house and byre, or indeed as either of these. Secondly, all buildings at Wijster were erected on posts sunk into post-holes. The Latimer building, as we have seen, had its timber walls erected on sleeper-beams. There is thus a basic difference of technique between the Latimer cruck building and the Wijster examples. With these important differences in mind it is difficult to relate the Latimer building to these early continental crucks. Rather would it seem that independent adoption of cruck construction in Britain and Westphalia might be postulated. However, whilst the building at Latimer remains the sole pre-conquest example in the British Isles, the origins of British crucks must remain obscure.

<sup>17</sup> Van Es, *op. cit.* in note 15, grave 116, and F. H. Thompson's comments in his review (*loc. cit.* in note 15).

<sup>18</sup> Van Es, *op. cit.* in note 15, fig. 41.