

A Timber-Framed Building in Cumberland Street, Luton

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SUMMARY

Part of a post-medieval timber-framed building in Cumberland Street, Luton was revealed when later buildings were demolished. It provides evidence of constructional methods in timber-framing in seventeenth century Luton.

DESCRIPTION

Recent demolition work on the corner of Park Street and Cumberland Street, Luton (TL 095209) revealed a fragment of a post-medieval timber-framed building, some – but not necessarily all – of the rest of the building having been itself destroyed in the recent demolition. The remaining fragment was examined by the writer in November 1972; this examination included the finding of two main timbers of the original structure on a heap of recent building debris behind the extant fragment. Luton has very few pre-nineteenth century buildings. The timber-framed house formerly standing in Upper George Street and known from a photograph gives a good indication of the general form of timber-framed buildings in and around Luton.¹ The fragment here reported is of equal if not greater importance in that it reveals some of the constructional details of a post-medieval timber building of the Luton district. It is the only evidence of its sort that we possess so far.

The site is behind Mr. Inglis' barber's shop, set back from the Cumberland Street pavement by about 20 ft. The lower halves of one end-wall and of portions of the adjacent side-walls remained *in situ* at the time of the survey. The south (end) wall is 17ft (5.2m) long with a corner-post at each end and a centrally placed storey-post,² all three of these main posts having been (recently) sawn-off immediately above the end-rail; they are about 6-7in (15-18cm) square. On the pile of debris behind the building, however, the upper portion of a corner-post was found, complete with its head-joints; the sawing-off had left a distinctive 'ridge' which matched exactly that on the top of

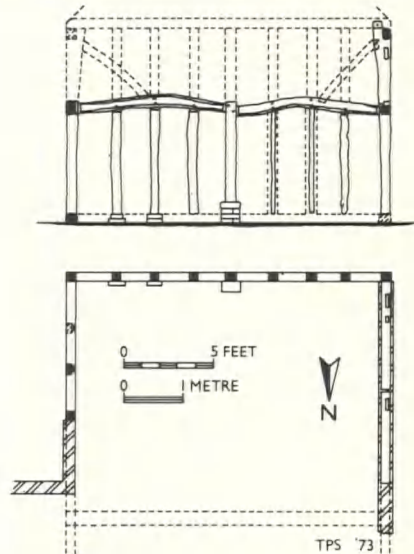


Fig. 1 Plan and elevation of building fragment in Cumberland Street, Luton

the stump of the south-west corner-post, and in Fig. 1 the upper portion is shown in its original position atop the present stump.

The end-rail is made up of two sections, each joined into one or other of the corner-posts and into either side of the central storey-post; Both sections are markedly cambered and have their lower arrises crudely plain-chamfered. The eastern section has its upper arris similarly chamfered, but the western section has only its western extremity chamfered in this way. The studs beneath this rail existed at the time of the survey, three between each corner-post and the storey-post. They are tenoned into the rail, as the rail itself is into the posts. The studs average 5in (13cm) across. The ground-sill on which they would have stood has been replaced, partly by projecting brick footings and partly by underbuilt brick walling, but the feet of all the studs correspond to the level of the ground-sill in the east wall. Clearly, the ground-sill of the south wall had become rotten and the whole wall had been

'footed',³ perhaps during the nineteenth century - the bricks are certainly standard size. All the panels have brick nogging, mostly of small, narrow bricks. There are patchings of standard size bricks. The nogging obscures any traces, in the form of mortises, of a bracing system at this level.

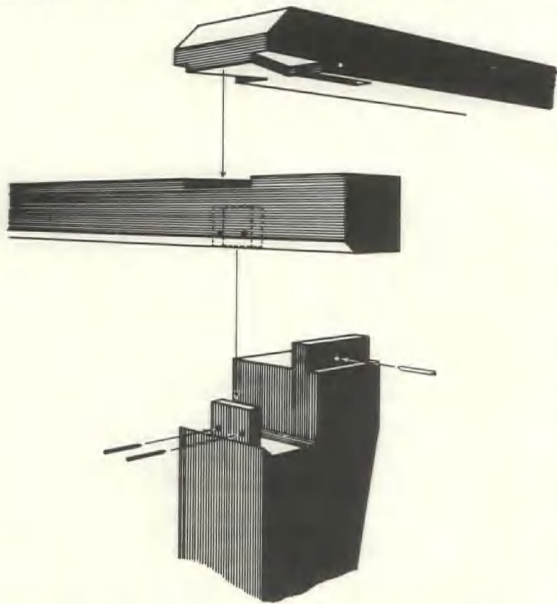


Fig. 2 Method of joining corner-post, wall-plate, and tie-beam in the Cumberland Street building.

The studs above the end-rail have gone, but their mortises (with peg-holes) are present in the upper surface of the two rail sections and correspond in position to the studs beneath the rail. The upper portion of the south-west corner-post is jowled towards its head in the end-wall plane, and at its head the back (west) face has been notched in the normal manner for the emplacement of the wall-plate's end. The joint system is shown in figure 2. The foot of the notch has to the outside a small raised portion designed to form a seating for the wall-plate. On the base of the notch is a tenon with part of one of its peg-holes visible; that there were originally two such holes is clear from the wall-plate itself which was found on the heap of debris. On the head of the jowl of the corner-post is a further tenon, set to one side and with a single peg-hole passing through it.

The wall-plate found on the debris had its joints sufficiently well preserved to make it clear that it fitted onto the south-west corner-post. The wall-plate's lower arris is chamfered to fit the seat-

ing of the notched part of the corner-post head, and its underside has in it a mortise to fit over the tenon; in the face of the wall-plate are two peg-holes, for pegs to pass into the tenon. The upper surface of the wall-plate has cut into it a lap-dovetail-mortise set to one side (when the beam was in position) of the upper tenon of the jowl-head. From these indications it is possible to reconstruct the underside of the original tie-beam running across the top of the south wall (fig. 2, top). This would have had at its end a lap-dovetail to fit the dovetail-mortise of the wall-plate and a mortise to fit over the tenon on the corner-post jowl-head. In its face would have been a peg-hole matching that in the tenon itself. The construction of this tying angle-joint resembles exactly that in use at the Granary, Cressing Temple, Essex.⁴

In order to eliminate a weakness at the point where the joints meet on the wall-plate this latter was extended beyond the end-wall-face for about 8 or 9 inches (20-23cm).

The end-wall had tension-braces⁵ above the rail, as is clear from the mortise for such a brace in the jowled edge of the corner-post and from the two mortises for the feet of such braces in the upper surface of the rail, each of which contains the bottommost portion of its brace. Each brace rose from the rail to its nearest corner-post, passing one stud, into which, presumably, it was halved. The central storey-post was not braced in this way at this level.

The total height of the corner-post - that is, of the building to wall-plate level - was about 11ft (3.4m) from the ground-sill.

The surviving lower half of the west wall is entirely of brickwork except for the side-rail, which runs along the top of the wall as it is at present, and which is tenoned into the south-west corner-post. The wall was presumably originally of timber-framing. Although much patched with later bricks the basic wall-fabric is of small red bricks 8-8½ by 4 by 2 in (20.3-21.6 by 10.2 by 5.1 cm), laid in Flemish bond. Many of these bricks, both headers and stretchers, have a deep green glaze. The brick wall is thicker both externally and internally than the rail, and it is possible that the studs exist beneath the brickwork. The rail is 7in (18cm) square and exists for a length of 11½ft (3.5m), at which point it has been sawn-off. The brick wall continues at the bottom for a further 2½ft (0.8m), at which point it has been hacked away. There is a straight joint, partly masked with

recent cement, some 6ft (1.8m) from the corner-post; possibly this represents a straight-butted scarf with secret bridle. ⁶ The upper face of the rail contains four mortises, the second from the south being much smaller than the others; the larger ones were probably for the tenons of the upper studs of the wall, whilst the smaller one housed the footing of a tension-brace to the corner-post, passing the first stud. The mortise for the upper end of such a brace exists in the appropriate face of the corner-post, and has one peg-hole provided to fasten the brace. The wall-plate formerly running along the top of this wall has already been described in part, in connection with the joint system at the south-west corner. On its underside the wall-plate has a series of regularly spaced mortises for the tenons of the upper studs. Beginning at a point 13ft (4m) from the (original) south end of the beam is one half of a face-halved and bladed scarf with four edge pegs. ⁷ (Fig. 3). The total length of the scarf is 2½ft (0.8m). The continuing member of the wall-plate has been lost. On the upper surface of the wall-plate, and actually on the scarf blade, is one side of a dovetail mortise (see Fig. 3), the other side of which would have been on the continuing member of the wall-plate. This is clearly the seating for the lap-dovetail tying joint of a tie-beam which, as well as 'tying' the two side walls, would have served to strengthen the scarf itself.

When the wall-plate was in position the dovetail would have been some 13ft (4m) from the corner-post, which gives the size of a single bay of this building.

Only the southern end of the east wall of the building remains. The ground-sill is a 6in-squared timber (15.2cm) and is preserved for a length of 12ft (3.7m) from the corner-post. Above this the wall is original for a length of 8ft (2.4m) from the corner-post, and thereafter has been replaced by a recent brick wall (Fig. 1). The wall has three vertical members, the two nearest the corner-post being lower studs, for they stop at the side-rail. Both these are in fact later timbers, but the original stud exists behind the more northerly of the two and is visible due to some fallen bricks; probably the original survives behind the other recent stud too. The third vertical member rose to the full height of the wall, though it is now sawn-off just above the rail; yet it is not a principal-post, for there is no indication of a tie-beam-seating on the wall-plate from the opposite (west) wall. It is therefore best termed a *storey-post*. The

one remaining section of side-rail is tenoned into this post and into the corner-post. The northern edge of the storey-post contains the mortise for the next section of rail, though the rail itself has gone. Over each of the lower studs, in the upper surface of the remaining section of rail, is a mortise for the foot of an upper stud; between these is a mortise for the foot of a tension-brace to the corner-post; the brace would have passed the first stud.

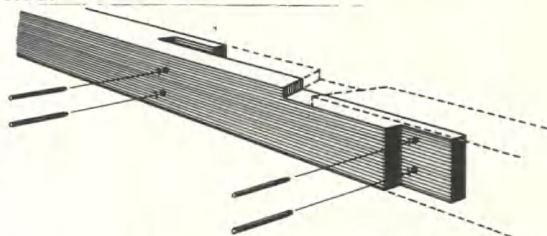


Fig. 3 Scarf in the wall-plate of the Cumberland Street building.

The storey-post is slightly thickened towards its (present) top, in the wall-plane, and, towards the foot, has a horizontal groove about 1in (2.5cm) wide and 1in deep. Its purpose is not known, and it may well be a relatively recent feature. The northernmost panel of the extant wall has a horizontal timber about halfway up, possibly the sill of a window, though the timber itself is recent. All panels have brick nogging, the upper portion of the panel being in rat-trap bond.

DISCUSSION

The method of jointing at the south-west angle of the building leaves it in no doubt that the present south wall was the original end-wall. We are thus dealing with a building of 17ft (5.2m) internal width. The length is not known, but it must have been a fair bit longer than 13ft (4m) - the length of one bay. Even if there were originally only a further half-bay, the total length would have been almost 20ft (6.1m) internally; whilst a further full bay gives a length of 26ft (7.9m) internally. As has been mentioned, the height from sill to wall-plate was about 11ft (3.4m). There are no signs of joist-joints in any of the rails, so the building must always have been 'open'. Of the original roof structure nothing at all is known; the covering may have been of tiles, for amongst the quantities of (undoubtedly later) Welsh slate a piece of tile was found in the debris. This measures 6in (15.2cm) wide by not less than 7in (17.8cm) long, and is cambered in both directions, as normal

in hand-made tiles. There are no nibs, but there is one peg-hole towards the upper left (when viewed from above).

The main timbers of the building are of reasonable scantling, and the whole is sturdily built. The end-rail, however, is of very irregular timbers, suggesting a late date. The close-set studs and the tension-braces place the building within the eastern school of timber-frame construction.⁸

The late dating suggested by the irregular end-rail sections is confirmed by the constructional details. The parallel tying-joint at Cressing Temple Farm (*supra* 128) is a building dated 1623;⁹ it is an effective joint, the setting to one side of the upper tenon preventing a weakness which might otherwise occur in the dovetail's central fibres. The face-halved and bladed scarf is assigned by C.A. Hewett (working in an Essex context) to the seventeenth century, and support for this dating comes from Cambridgeshire, where the Royal Commission on Historical Monuments report that the type was in use from the seventeenth to the nineteenth century.¹⁰ A seventeenth century date would therefore seem to be indicated.

The small bricks occurring in the fabric might also belong to this date or to any time prior to the 1784 brick tax, when increasing taxation rates (payable *per* brick) caused an increase in size.¹¹ It seems likely that the lower half of the end-wall would have included braces originally, in which case the brick nogging must be at least slightly later than the timber-framing itself; and certainly the brickwork of the west wall (although of the small bricks) must be later than the framing.

The purpose of the building is a matter of uncertainty. An open-hall house of seventeenth century date would be unusual, though not impossible, since this form of house - though it began to go out of favour in the sixteenth century - did continue in use until the nineteenth century, at lower and lower social levels.¹² Another possibility to be considered is that the building was some sort of barn. Whether house or barn, the building is likely to have been erected by one of the many yeomen or maltsters who put up homes in Luton during the sixteenth and seventeenth centuries.¹³

NOTES

1 T.P. Smith, 'A Demolished Timber-Framed Building at Luton', *Beds. Arch. J.*, 7 (1972), 73-7

- 2 Sc. a post reaching the full height from ground-sill to wall-plate (top-plate), but not directly supporting the roof structure (*sc.*, at this point, a tie-beam) and therefore not a principal-post. The distinction is not always made, but it is useful.
- 3 For this term *vide* M.W. Barley, *The English Farmhouse and Cottage* (1961), 256.
- 4 C.A. Hewett, *The Development of Carpentry 1200-1700; an Essex Study* (1969), 157-9, 191.
- 5 Sc. braces rising from a horizontal member (in this case a rail) to a vertical member (in this case a corner-post) at a point fairly high up on the latter. The term is Stuart Rigold's: *vide* S.E. Rigold, 'The Timber-framed Buildings of Stevenon (Berks) and their Regional Significance', *T. Newbury D.F.C.*, 10, 4(1958), 4-13 (this ref. p.5); *cf.* M.E. Wood, *The English Medieval House* (1965), 222, 224. The term 'down-brace' is an acceptable alternative.
- 6 For this term *vide* Hewett (1969), 185, where a squint-butted version is illustrated.
- 7 For these *vide* Hewett (1969), 184.
- 8 Defined by J.T. Smith, 'Timber-building in England', *Arch. J.*, 122 (1965), 133-58. Also R.W. Brunskill, *Illustrated Handbook of Vernacular Architecture* (1971), 54-5, 178 for a simplified version of Smith's distribution map. One half of the Upper George Street house also displayed framing of eastern type: *vide* T.P. Smith (1972), 75-6. Hewett (1969), 157-9, 191.
- 9 A related, but not exactly similar, example again occurs at the Cressing Temple Granary: Hewett (1969), 184. For north-east Cambs. *vide* Royal Commission on Historical Monuments, *An Inventory of ... North-East Cambridgeshire* (1972), *xlvii*. The sequence of scarfs: *splayed/edge-halved/face-halved* seems to be general for south-east England; it may therefore be used as a basis for a relative chronology, and probably, so far at least as the face-halved sort is concerned, for an absolute chronology too, scarfs of this type being indicative of a post-medieval (seventeenth century onwards) date. For such scarfs in such a context in Kentish barns *vide* S.E. Rigold, 'Some Major Kentish Timber Barns', *Arch. Cant.* 81 (1966), 1-30 (this ref. p.5). For Hewett's original proposal of a sequence for scarf-joints *vide* his 'Structural Carpentry in Medieval Essex', *Med. Arch.* 6-7 (1962-3), 240-71.
- 11 For a discussion of brick sizes and for the Brick Tax *vide* A. Clifton-Taylor, *The Pattern of English Building* (revised ed., 1972), 248-9.
- 12 *Cf.* P. Eden, *Small Houses in England 1520-1820* (Historical Assoc. Pamphlet H.75, 1969), 9; and Brunskill (1971), 106-7.
- 13 W. Austin, *History of Luton and its Hamlets*, vol. 1 (1928), 220. *Cf.* Smith (1972), 77. The pre-*circa*-1850 development of Luton and its numerous hamlets, with a special stress on vernacular and other buildings, is the topic of an ongoing study by D.H. Kennett and the writer. I am grateful to Mr. Kennett for drawing my attention to the building fragment discussed in the present paper.

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