PURTON GREEN, STANSFIELD: SOME LATER OBSERVATIONS ON THE EARLY AISLED HALL

by J.L. WALKER

THIS PAPER MAKES a few further observations on the structure and development of the 13th-century timber-framed aisled hall at Purton Green (Pl. VII), adding to the description by George and Sylvia Colman in these *Proceedings* (Colman 1965, 149–65). Briefly, this building has surviving in its centre just over one bay of an early aisled hall consisting of the open truss of the hall and north of this a closed truss, both of which have passing braces. The arcade plates of the aisled hall continue north of the closed truss though the rest of the building north of this truss was rebuilt in the 15th century. South of the open truss the arcade plates continue for about half a bay, but beyond that the rest of the building was rebuilt in the 16th century. At the time the Colmans surveyed the building it was in very poor condition and much of it was covered with plaster obscuring in particular much of the ground floor. Since then the building has been repaired, and most of the plaster removed along with some of the later features such as the floor that had been inserted in the open hall. This revealed, in particular, the lower part of the closed truss, the position of the aisle tie in the open truss and the position of an open hearth, all of which suggested a slightly different interpretation.

SUMMARY

The building now appears to have been very similar to other early aisled halls with passing brace trusses (Fig.29). The hall consisted of two full bays probably each about 15ft (4.6m) square, not one and a half bays as originally thought; the closed truss can now be seen to be at the low end of the building; the low end bay north of the truss was divided into two, presumably service, rooms on the ground floor with a first floor chamber above, not open to the roof as originally thought; and the aisle originally continued right round the northern end of the bay. The side aisles were altered later in the medieval period, as happened at a number of other aisled halls, to reduce their width by a couple of feet (0.6m) and raise the height of the side walls. This was probably done to allow more light into the hall and perhaps also to allow larger 'fashionable' windows to be inserted. However some features are still unusual in that there were two additional tie-beams at the low end, one of which, with no known parallel, was dovetailed to the dragon-ties, not the arcade plate (Fig.29); and while the scarf joint in the west arcade plates is similar to the edge-splayed scarf in other aisled halls (Fig.34), that in the east plate is face-splayed and very ineffective (Fig.35). In addition, the repairs revealed that the low end closed truss was very decorative, having continuous arched openings across the whole of the ground floor with planking infill behind the arches and up to the collar (Fig.32); unfortunately they revealed nothing about the high end of the hall.

DISCUSSION

The open hall had two full bays, probably of equal size as in a number of other early aisled halls with passing braces such as Church and South Cottages, Cookley (Fig.36); the 13th-century Fyfield Hall, Fyfield, Essex (Smith 1955, 29); and the late 12th-century Harlowbury in Harlow, Essex (Gibson *et al.* 1982, 182). The main evidence for this second full bay is the position of the open hearth. It is in the second bay, south of the open truss (Fig.30), and if this bay had been the

PLATE VII – Purton Green: the west front (photograph by Richard Hayman, reproduced by permission of the Landmark Trust).

same size as the surviving bay, the hearth would have been almost in the middle of the bay. In addition, for reasons discussed below, this south bay is at the high end of the hall and therefore could be expected to be either the same size or larger than the low end bay.

If both bays were of equal size, the hall would have consisted of two bays each 15ft long between the arcade posts by almost 15ft wide across the nave between the arcade plates (4.6m × 4.55m). This compares with 14ft by 15½ft wide (4.3m × 4.7m) at Cookley, 18ft by 16ft wide (5.5m × 4.9m) at Fyfield Hall, and 21ft by 20ft wide (6.4m × 6.1m) at Harlowbury.

It should be noted however that not all 13th-century aisled halls had equal sized bays. Tollesbury Hall, Essex (McCann and Scott 1987) has an 18½ft-long high end bay and a low end bay just over 14ft long by 18ft wide (5.6m and 4.3m × 5.5m).

When the plaster was removed from the closed truss to the north of the hall the latter was found to be very decorative, with a continuous series of six arched openings along the ground floor (Fig.32 and Pl. VIII). It also showed that the aisles had originally been wider. All the arches had been removed but they can be reconstructed from the trenches and chamfering on the rail and posts (Fig.33). As those at each end of the truss originally finished outside the present side walls, it is clear that the aisles were originally wider. There is clear evidence that this narrowing occurred in the medieval period. This is because it involved removing the

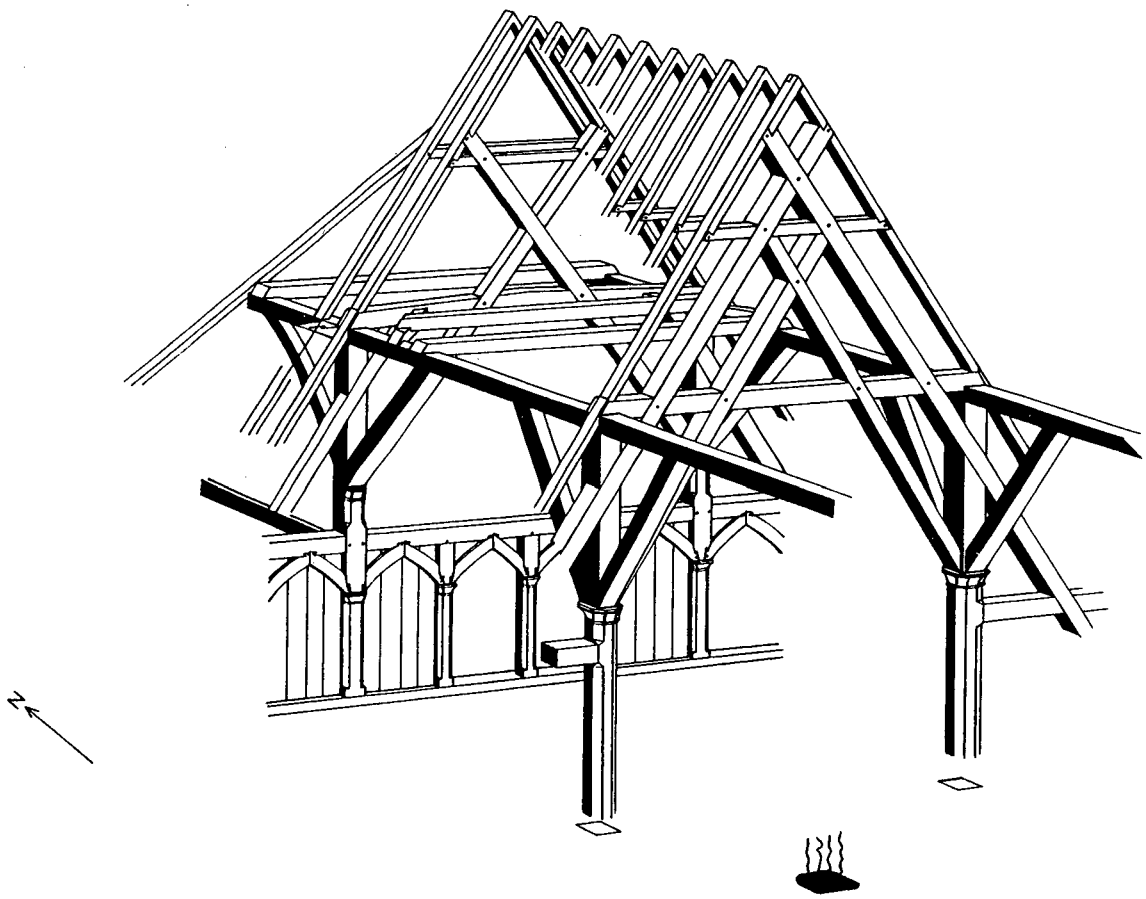

FIG. 29 – Perspective of remaining part of aisled hall at Purton Green.

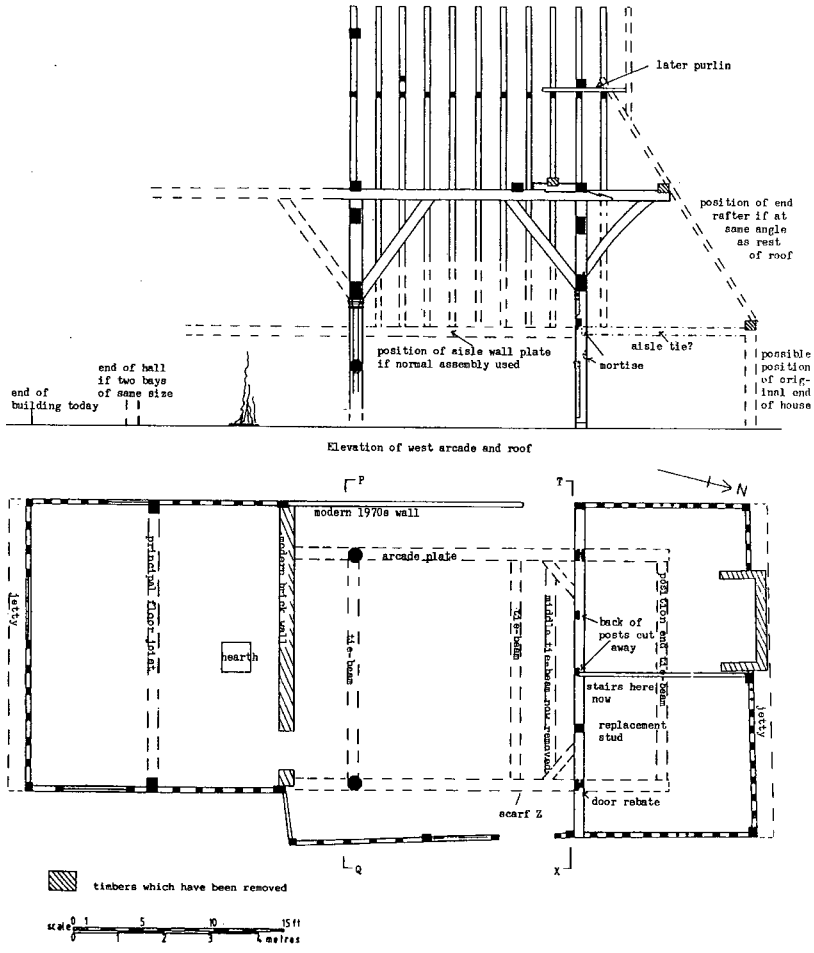

FIG. 30 – Plan of Purton Green as existing now and elevation of remaining part of aisled hall.

passing brace that ran from aisle tie to tie-beam in the closed truss, and the empty trenches left in the arcade posts are heavily smoke-blackened, showing that the change occurred while the open hearth was still in use. This narrowing of the aisles has now been recognised as occurring in a number of other aisled houses, such as Fyfield Hall and Wynter's Armourie, a base-cruck aisled hall at Magdalen Laver, Essex (Walker 1987, 26). The alteration was probably made mainly to increase the height of the side walls and allow larger windows to be inserted to light the hall.

This change may have been partly influenced by fashion – that is, the desire to have large windows as inserted at Wynter's Armourie – as well as to increase the light in the hall. Aisled halls such as Purton Green with low side walls would have been very dark, though they probably had some form of oriel window, as is the case in some later aisled halls. No evidence survives for any window at Purton Green, but the early 14th-century Upton Court, Slough (Thornes and Fradgley 1988) had a single 'dormer' window over each aisle in the high end bay adjacent to the centre truss. Other houses, such as Stanton's Farm, Black Notley (*R.C.H.M. Essex* 1921, 20) and Tiptofts, Wimbish (*R.C.H.M. Essex* 1916, 352) had a separately framed oriel window on one side near the high end. The hall at Tiptofts with its oriel window is a complete early 14th-century rebuild – with higher side walls and slightly

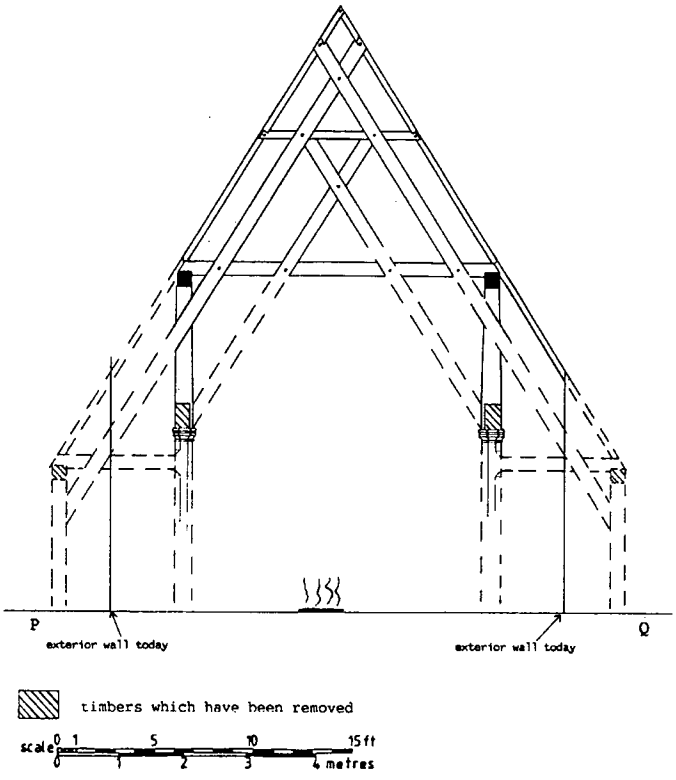

FIG. 31 – Elevation of south side of central truss of aisled hall.

narrower aisles – of an earlier and lower aisled hall of which only the low end cross-wing survives.

The evidence for this narrowing of the aisles is not always as positive as at Purton Green. Unfortunately there is no clue to the exact width of Purton Green's original aisles. At least three widths are possible, depending on whether there was just one complete arch in the aisle (case A in Fig.32), whether reverse assembly was used (case B) or normal assembly (cases C and D). Normal assembly, giving an aisle of around 5½ft (1.65m), is the most likely as it is the more usual form and is aesthetically the most plausible. This would have allowed either one-and-a-half arches in each aisle (case C) if the passing brace finished on the middle rail, or case D with one arch and the brace passing through the middle rail to the aisle wall post. Case D is the most likely when compared with other buildings. Case A, with the aisle wall plate considerably higher than the aisle tie, is unlikely, given that the aisle tie in the open truss is at the same height as the aisle tie (or middle rail) in the closed truss. It would have been more plausible if the aisle ties in the two trusses had been at different heights. Reverse assembly (case B) would have given a clumsy finish to the otherwise attractively designed arcade.

Of the six arches in the closed truss, three were doorways; the middle two and the one in the eastern aisle. The latter was probably for stairs, though the door opened inwards into the end bay, not outwards into the hall. The other three arches were blind arcades infilled behind with planking, as was possibly the rest of the truss up to the collar. The truss appears to be at the low end of the hall. This is shown by the two doorways in the middle, presumably for service rooms; by the position of the hearth which is usually in the high end bay of large halls; and because the finished face of the open truss – that is, the side on which the passing braces are finished flush with the tie-beam, arcade posts and rafters and which naturally faces the high end – is on the south side, not facing the closed truss.

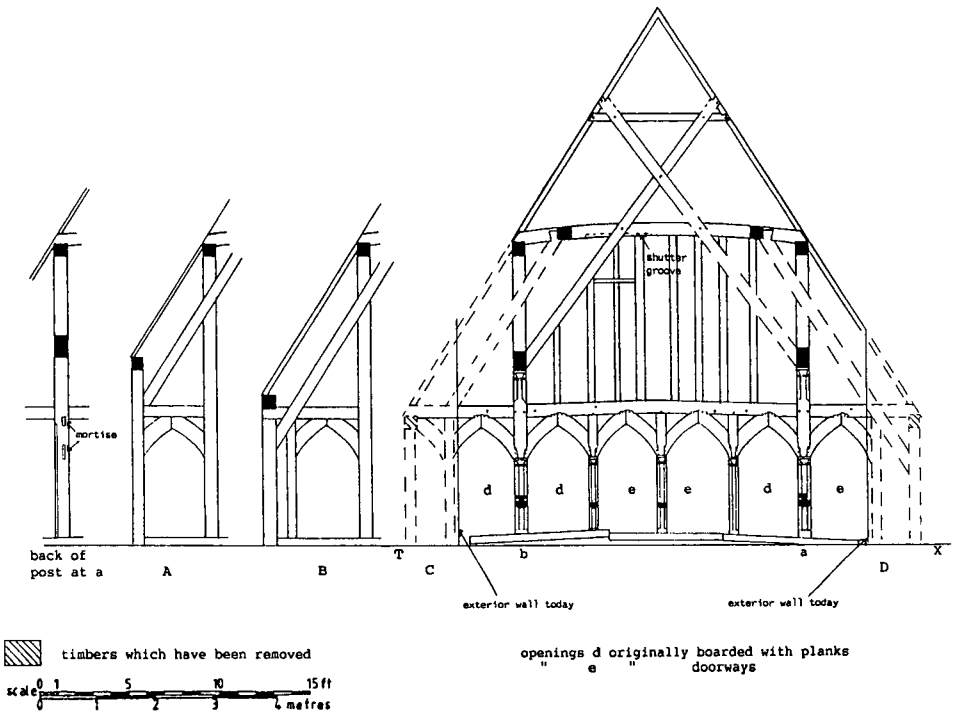

FIG. 32 – Low end partition: (A)–(D) show four possible positions of side walls to original aisled hall.

No other timber-framed aisled hall has yet been found with a continuous row of arched openings in the low end truss. There are decorative arcades in the aisled hall of Great Bricett Priory (Sandon 1977, 43), but these are not continuous. The arches at Purton Green were lap-jointed to both the posts and the middle rail, using what is almost a refined open notch-lap joint on the vertical posts and a form of dovetail joint on the middle rail (Fig.33). Great Bricett Priory also has lap-jointed arches, as does Abbas Hall, Great Cornard (Mercer 1975, 203), but neither use open notch-lap or dovetail lap-joints.

On the ground floor, the closed truss at Purton Green has grooves in the arcade posts and soffit of the middle rail of the three infilled openings, for planking behind the arches. The evidence for planking in the upper part of the truss is more speculative. It was thought that this upper part might originally have had no infill and been open. The one pair of surviving original rafters to the north are smoke-blackened, whereas the truss's plaster infill both below and above the tie-beam is smoke-blackened only on the hall (south) side, suggesting that the infill is later. Also the studs between the middle rail and tie-beam are of poor quality and not pegged, and when the building was repaired the soffit of the tie-beam was found to be smoke blackened. However there is a groove along at least part of the soffit of the tie-beam (marked as a shutter groove in Fig.32). Its exact length is not known, but it may run the full length of the tie beam and have been for planking.

A planking infill would be consistent with the soffit of the tie-beam being smoke blackened because, with settlement and movement of the building over time, gaps would open in the planking, allowing smoke through. The part of the groove which can be examined is completely smoke-blackened. The area between the arcade posts is rather wide to be covered by planking

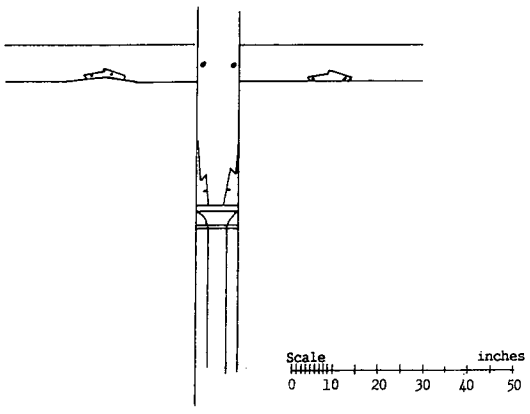

FIG. 33 – Seating for 'braces' in post 'a' in low end truss (TX).

without any intervening studs, and any planking would have been very susceptible to distortion as the building settled, thus requiring its replacement or repair at a relatively early stage. It seems likely that there was always some infill, because the braces to the arcade plates on the north side of the truss are not straight, as in the hall, but slightly curved (Fig.30), implying that they were never intended to be seen from the hall. Evidence of planking up to the tie-beam was found in the high end aisled truss of a base-cruck hall, now a barn, at Gillhope Farm, Mayfield, Sussex (Martin 1977, 1). Planking infill has been found in a number of other 13th- and 14th-century Suffolk houses, such as the now demolished house at No. 13 Brentgovel Street and No. 47 Abbeygate Street, Bury St Edmunds.[1]

The main evidence for a floor and upper chamber in the north bay is the door in the east aisle, as this is in the right position for the stairs. However in the back of the two arcade posts (see post 'a' in Fig.32) are two mortises. The upper one was for a horizontal rail at exactly the same height as the aisle wall plate if normal assembly was used, and could have been the rear aisle tie. A floor lodged across these rails would have been level with the middle rail in the closed truss.

The upper mortise on the east arcade post, but not on the west, was originally cut as a 'V' mortise and then recut as a four inch deep horizontal mortise. As this does not occur on the west arcade post – this being a horizontal mortise – the 'V' was probaby a mistake by the carpenter rather than a later alteration. Both lower mortises were cut as a simple 'V' and were probably for a short brace up to the horizontal rail. 'V' mortises were sometimes used for rising braces in early buildings and have been found in the braces to the arcade plate in the Knights Templars' aisled hall at Temple Balsall, West Midlands (Alcock 1982) and the early 13th-century aisled Barley Barn at Cressing Temple, Essex.[2]

The aisle probably continued right round the northern end of the building, giving a hipped end roof with a smoke hood. This is indicated by the continuation of the arcade plates for nearly 6ft (1.8m) north of the closed truss, finishing with a tie-beam but with no arcade posts below (Fig.29). Where this happens in other aisled buildings, such as the Cressing Temple Wheat Barn, Essex (Hewett 1980, 102–05), the aisle continues round the end of the building, giving a hipped end roof pitched at the same angle as along the sides. If this applied at Purton Green, the rafters would have finished on the collar of the first pair of rafters north of the closed truss (Fig.30). This pair are part of the original aisled building – they use the same type of inset lap joint for the collars as is used in the open hall, and are heavily smoke-blackened – whereas the rafters further north have a different joint and are later. The area above the collar both of this pair of rafters and of the closed truss was probably open to allow smoke to escape from the hall. In addition

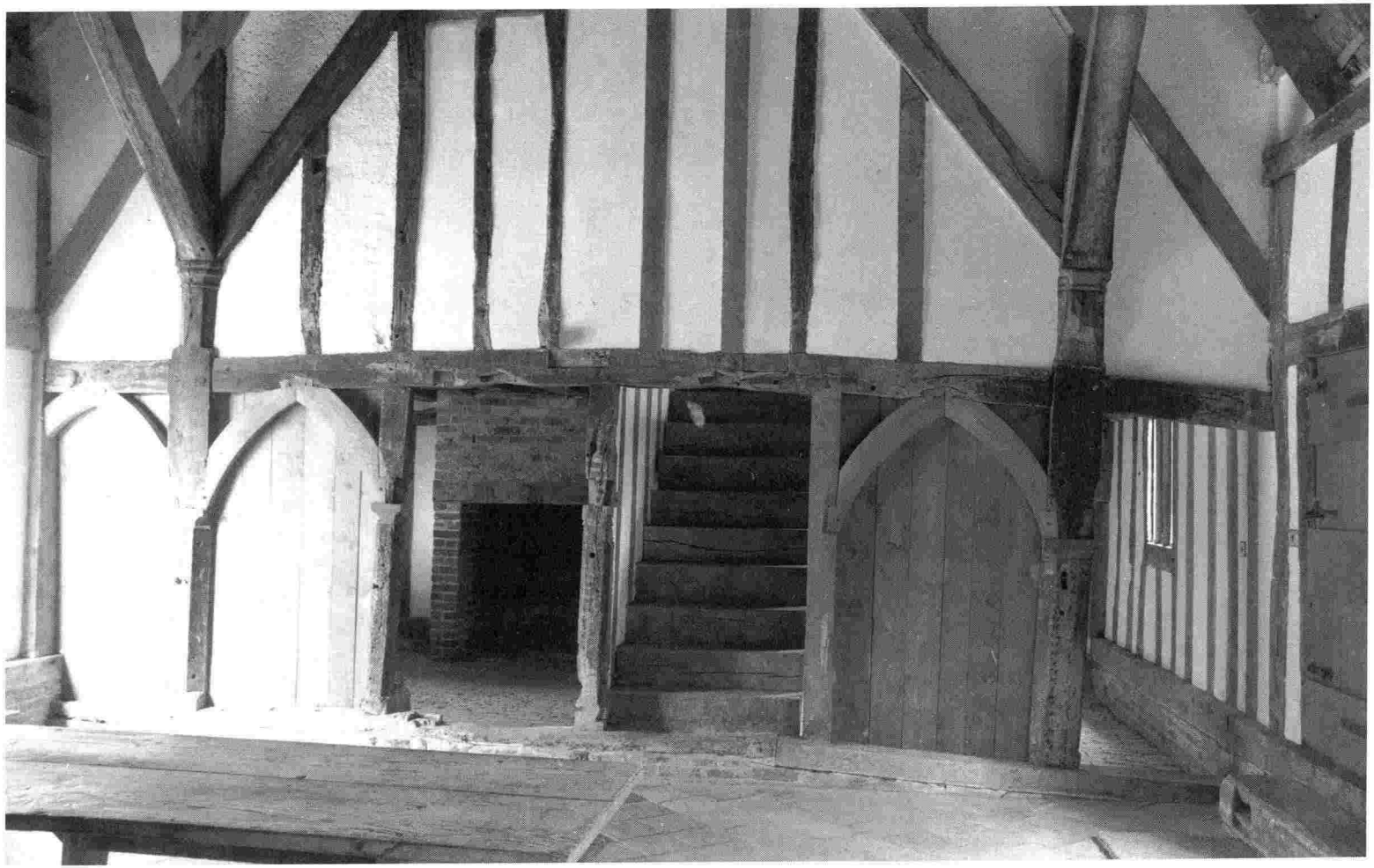

PLATE VIII – Purton Green: the low end partition at the north end of the hall, with most of the arches reconstructed (photograph by Richard Hayman, reproduced by permission of the Landmark Trust).

some kind of hood would have been needed to prevent rain coming through this large opening. This may explain why two short side purlins were inserted and laid on the collars at the north end, the tops of the passing braces in the closed truss being removed in the process (Figs 30 and 32). These purlins continue beyond the first set of rafters north of the closed truss and were probably to support or strengthen the hood. They are heavily smoke-blackened and thus likely to have been inserted fairly early. The hood must have been similar to that thought to have been at Stanton's Hall, Black Notley, Essex (Gibson 1974, 30).

Two main types of passing braces are used in the central trusses of aisled halls. That at Purton Green is the less common type where a single long length of timber rises from aisle to rafter, locking the whole truss together. Another example is the Barley Barn at Cressing Temple in Essex (Hewett 1980, 59–63), built between 1205 and 1235 (denrochronological felling date by Ian Tyers, Museum of London). However, in most aisled buildings with passing braces rising from aisle to rafter, such as Church and South Cottages, Cookley and Brockley Hall, some three miles north-east of Purton Green and a little later in date, the braces consist of two separate timbers, halved across either side of the arcade posts and tie-beams (Fig.36). They are usually in two lengths, one rising from wall post to tie-beam or arcade post, with a separate piece continuing on to the rafters. In many of these buildings notched lap joints are used for the passing braces. However, apart from the notch lap variant used for the arcade in the low end truss, only barefaced lap dovetails are used in the surviving parts of Purton Green.

Of the two scarf joints in the arcade plates, that in the east plate is unusual and ineffective. The one in the west plate in the low end bay (Fig.34) is similar to the edge-splayed scarfs found in many other aisled halls (Hewett 1980, 263–67). The other, in the east arcade plate, is somewhat different, being stop-splayed across the face, not the edge, with angled under-squinted abutments (Fig.35). It does not work very well, as it has splayed outwards towards the aisle and has had to be reinforced with iron clamps. This is despite its being above the brace from the closed truss and below one of the extra tie-beams at the low end. A similar scarf joint was used in the north arcade plate at Harlowbury. This has also been reinforced by iron clamps, possibly from the day it was built. The scarf joint in the south arcade plate of Harlowbury is more conventional.

As already mentioned, there was an unusual arrangement of three tie-beams plus dragon-ties at the low end. One tie-beam is as normal on the closed truss and there is one nearly 4ft (1.1m) further south above the arcade braces from the truss. Between them is a third which, unlike any

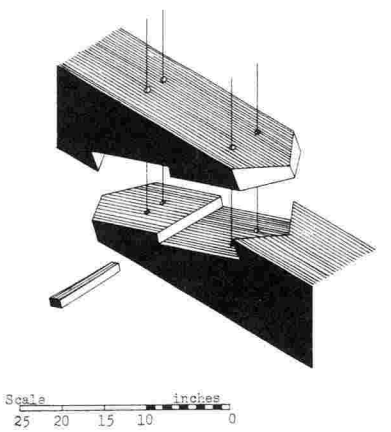

FIG. 34 – Stop-splayed and tabled scarf with under-squinted and sallied butts, transverse key and four face pegs in west arcade plate at Purton Green.

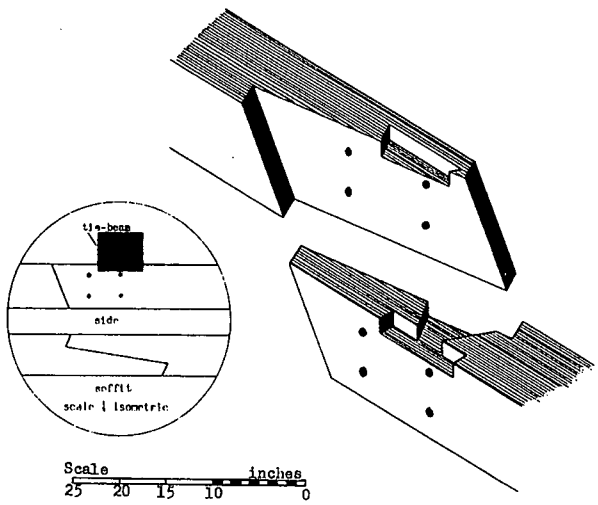

FIG. 35 – Stop face splayed scarf with angled under-squinted abutments and four edge pegs in east arcade plate under third tie-beam at low end of Purton Green (point Z on plan, Fig. 30).

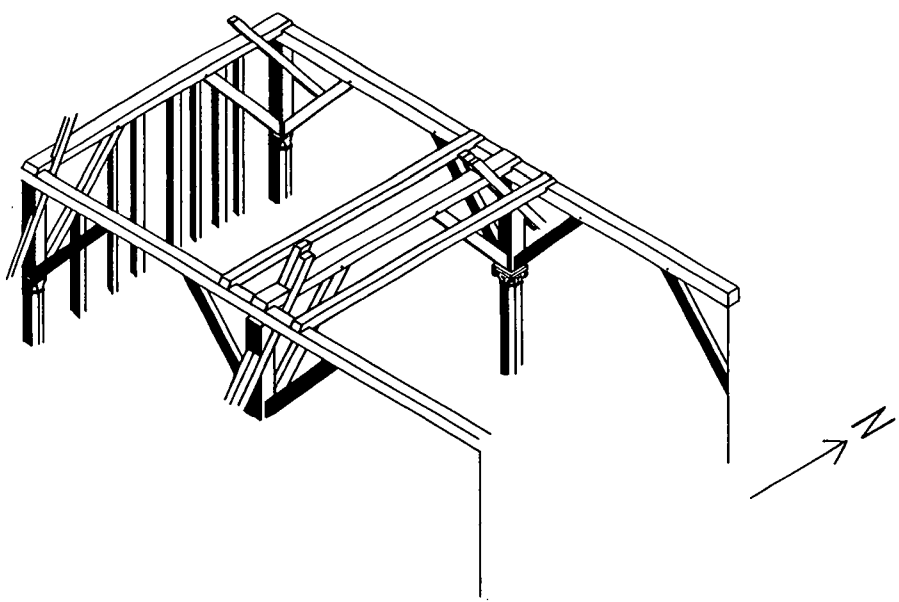

FIG. 36 – Partial reconstruction of aisled hall within Church Cottage and South Cottage, Cookley (south side of central truss based on north side).

other known aisled hall, is dovetailed on to the dragon-ties between the arcade plates and the tie-beam of the closed truss (Fig.29). This middle tie-beam is missing, but there is a heavily smoke-blackened empty dovetail housing in the one surviving dragon-tie on the west side. Brockley Hall had three tie-beams at the low end but no dragon-ties, and all are dovetailed to the arcade plate. Brockley Hall also has another three at the central open truss of the hall, with one on either side of the central truss tie-beam, as do Church and South Cottages, Cookley (Fig.36) and the 14th-century Church Farm, Fressingfield (Hewett 1980, 164).

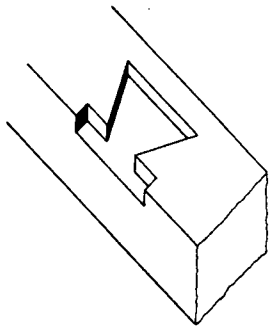

FIG. 37 – Inset dovetail with square entrant shoulders (not to scale).

The use of a three tie-beam configuration is probably a Suffolk regional feature, since it has not yet been observed outside Suffolk. Two Essex aisled halls have recently been found to have extra or flying tie-beams across the centre of both hall bays (Fyfield Hall) or just the high end bay (Tollesbury Hall) (McCann and Scott 1987). Temple Balsall in the West Midlands also has a flying tie-beam across the middle of each bay, plus another one close to the central truss. Philip Aitkens has suggested the Suffolk configuration forms part of a long tradition of multiple tie-beams,[3] and it may well be that all multiple tie-beam structures have their roots in the Romanesque form of a tie-beam to every pair of rafters. However, by the time Purton Green was built, this three tie-beam motif must have been purely decorative, though it might be argued that the third one at Purton Green was to support a weak scarf joint!

The dragon-tie is not a regular feature in many surviving aisled halls in East Anglia and even less so within the open halls. At Tollesbury Hall they occur at both the high and low ends of the open hall and at the low-end only at the Bury, Clavering, Essex (Hewett 1980, 108). They also sometimes occur at the very ends of buildings where the aisle continues round the end of the building and there is no arcade post under the end tie, such as at Abbas Hall, Great Cornard (Hewett 1976, Fig. 7), and at an aisled hall at Feering, Essex.

CONCLUSION

Purton Green is much more like conventional aisled halls than was originally thought, and appears to have had the conventional late medieval plan in so far as it had two service rooms at one end of the hall, plus a two bay hall. However the late 13th-century date of construction first suggested by George and Sylvia Colman still appears to be right. Also two minor features they noted have since been found in numerous early aisled halls in East Anglia: the inset bareface lap-dovetail to the rafter collars (Figs 31 and 32) and the inset lap-dovetail with square entrant shoulders for the tie-beams (Fig.37; Hewett 1980, 273).

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NOTES

1 Information from Philip Aitkens.
2 Information from David Stenning.
3 Private correspondence.

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