Two Hall and Crosswing Buildings in East Bedfordshire J. M. BAILEY

INTRODUCTION

This paper describes two "Hall and Crosswing" buildings which became available for study when modernisation work was recently carried out. From certain common details it would appear that they were built at a similar date which was most probably the 15th century. The type is fairly common in the county but to date only a limited study has been made and it is felt that this will be useful comparative material to relate to similar buildings in other counties. Typical examples of hall and crosswing buildings in Bedfordshire include Basmead Manor, Staploe; the Old Plough Inn, Bolnhurst; and Cause End Farmhouse, Wootton. Of these only the first has been studied;1 another published building of the type is cited later in this paper.

The buildings discussed in this paper are in different situations. The first, Sun House, Potton, is a town building off the market square of a minor town; the second is in an isolated rural setting at Upton End, Shillington.

SUN HOUSE, POTTON

HISTORICAL BACKGROUND

The first known written record of the building is dated as late as 1668 when at the Winter Assizes, Andrew Rayment was presented for having a common ale house at Potton contrary to the statute.2 The building was then called the Inn and from a series of deeds3 dated between 1689 and 1717 Andrew Rayment's property seems to have included the two-bay cottage to the south of the building discussed in this paper. The cottage has no obvious structural relationship to the Sun Inn and the record of one Andrew Beymond in the 1671 hearth tax relates solely to the Sun Inn. The building then had three hearths, one fewer than of chimneys as the house had in 1975.4 During the eighteenth and nineteenth centuries references are sparse; documentation as a public house ceases when a licence was refused to the Biggleswade Brewery on 27 August 1907.5

THE BUILDING

The building, in its present form, has a main twobay block parallel to the road comprising two rooms at ground floor level and two rooms at first floor level. There is a full height wagon way to the south. At the northern end of the main block is a jettied crosswing of two bays. (fig 2; section AA).

Detailed investigation of the structure showed that the northern bay of the main block is in fact part of what was a two-bay hall. The hall was originally of two bays, the second bay being to the north where the present crosswing is situated. The evidence for this is contained in the surviving 1.5 metres of this second bay in which a late 16th century chimney stack is situated. Examination at the side of this chimney revealed the moulded post of a truss and above, embedded in the upstairs chimney breast, the corresponding moulded tie beam and evidence of the arching braces of the truss. (fig 2).

The rafters over the surviving hall bay and the 1.5 metres of the second bay are heavily sooted, as is the southern wall of the hall.

It is most unlikely that a hall would have been built with a second bay 1.5 metres in length so it seems reasonable to conclude that the hall was of two equal bays each of 3.25 metres. Presumably there would have been a further service bay on the northern end to make up the total length of the site. It was also noticed that the southern face of the later crosswing is heavily sooted. This must indicate that after the wing was built, the hall continued to be in use and was not floored, or that there was a smoke hood inserted backing onto the wall of the wing. This second alternative is unlikely for reasons discussed below.

The plan of the building (fig 1) is shown in reconstructed form with studs located from surviving mortices indicated. Also indicated in figures 1 and 2 are the reconstructed elevations and sections, again with the missing studs; a front elevation with all conjectural studs shown in full line is shown in figure 1 for clarity.

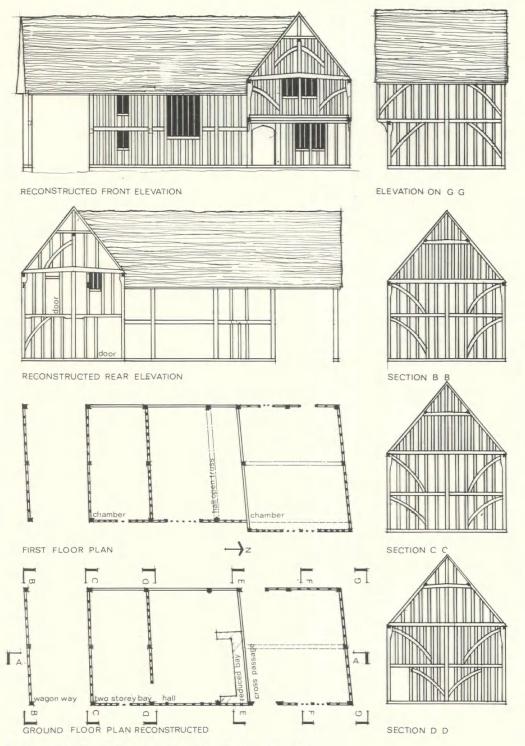


Fig 1 Sun House, Potton: plans, elevations and sections. Scale as figure 6.

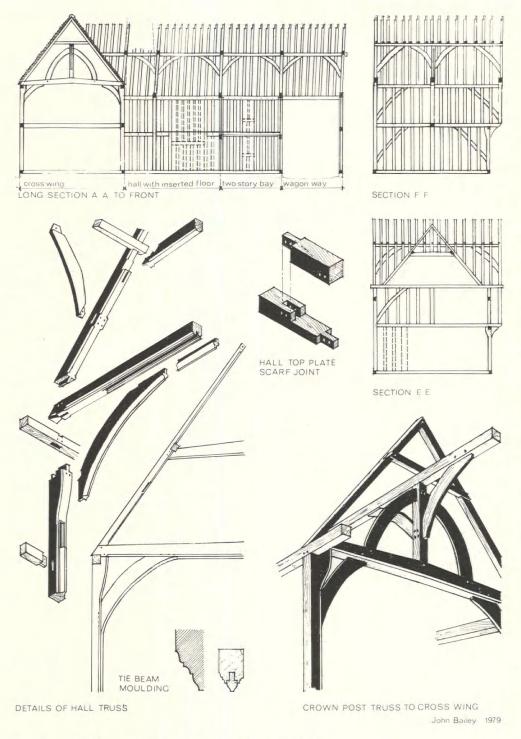


Fig 2 Sun House, Potton: sections and framing details. Scale for sections as figure 6.

The main block is close-studded on all elevations except the rear, and the cross walls are infilled in a similar manner. Tension braces are added to the cross walls only. The roof of the main block is of clasped purlin construction with the principal rafters reducing above the collar. Wind braces are in every bay.

The Cross Wing

The later cross wing is interesting as it has a crown post roof. This shows that clasped purlin and crown post roofs were being used at the same time in Bedfordshire during the 15th/16th century. This has been noted in other buildings in the county as at 115-117 Great North Road, Eaton Socon, and at Crowhill Farm, Bolnhurst, although at the latter it was the hall which had the crown post roof and the wing had a clasped purlin roof.

The side and rear elevations of the cross wing could be reconstructed completely (fig 1). The front elevation above bressummer level was complete except for limited damage caused by an inserted window. Below bressummer level the front elevation has been reconstructed from evidence on the underside of the mid plate.

The front elevation of the cross wing is shown in its fully reconstructed form in figure 1. When facing the front from the outside, there was a doorway on the left. Under the mid plate there is evidence of the slot for spandrel panels and there is a hollow mould on the outside extending the width of the door opening. Further along the underside of the mid plate, there were mortices for the window mullions for two three-light windows. As no studs remain in the lower half of this elevation, the sill height of the windows is conjectural. The first floor of the front elevation is in-filled with close set studs. There is positive evidence from mortices under the beam of two three-light windows on centre of the wing. Tension braces curve downwards from the corner posts to tenon into the sides of the in-fill studs. The gable is also close-studded and here braces from either side of the crown post curve downwards to tenon into studs on either side.

The rear elevation, when reconstructed (fig 1), indicates that there may have been a contemporary extension built onto part of the rear of the cross wing. When looking from the rear there is a surviving blocked doorway to the left hand side of the elevation at first floor level. Alternatively, this could have been external access to first floor

level either as means of ingress or else for loading. There are two tenons just below tie beam in the north-west corner post and a stud forming the reveal of the first floor window. These may have been for some form of building on the rear but there is no other structural evidence for this. The window at first floor rear was of three lights. At ground floor on this elevation there was a door at the extreme end nearest the hall. This lines up with the door on the front elevation. There was a single arch brace at ground floor and only one brace to the crown post, there being no mortice whatsoever on one side of the crown post.

The external elevation (north) of the wing is infilled with close set studs. Arch braces are at both ground and first floor. (fig 1, section GG).

The construction of the internal elevation of the wing cannot be completely determined as much of the evidence is hidden by the inserted chimney (fig 2, section EE). On this elevation, unlike the other, the end girth appears to be continuous, unbroken by the centre post. At first floor level the wall is close studded with curving braces on the hall side. In the part of the ground floor level in the rear half which can be analysed, there is evidence of a door opening towards the centre. Interestingly this overlaps the inserted fireplaces which must indicate that the hall remained in use as such and was unfloored after the cross wing was built, with the screen passage now being within the new cross wing. Also, the smoking extends over the entire new truss, strutted across the later wing top plate. This must also limit the possibility of a smoke hood being used in conjunction with a floored hall.

Section AA (fig 2) is taken on the centre truss of the cross wing. A cross passage almost certainly ran through on the hall side, but as the present ceiling is plastered we cannot see if there was a partition running across the wing.

At first floor level the wing was one room. Braces spring from the posts up to the underside of the central tie beam. The underside of the tie beam and the posts are simply chamfered on both sides with plain stops.

A complete roof remains and is of crown post construction. Each crown post is braced upwards to the purlins (fig 2 detail) and downwards to the tie beams. In each instance the braces tenon centrally into post, purlin or tie. The central crown post is square without chamfer or moulding.

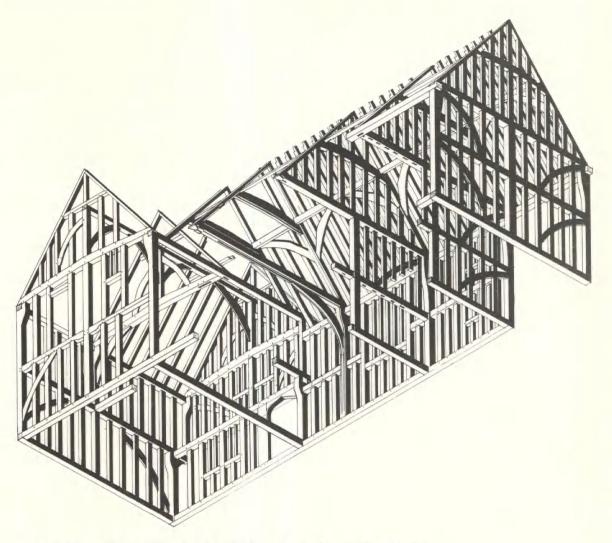


Fig 3 Sun House, Potton: isometric of frame viewed from back and below.

The Hall Wing

The hall wing surviving element is in three parts:—
the wagon way; the original floored bay with a
single room at ground and first floor, and the
remaining 1½ bays of the original hall now floored
over and with inserted chimney at its north end.
Section BB (fig 1) shows the wagon way end. It is
of close studded construction. Tension braces are
at both first and ground floor level. Section CC
shows the wall of the original floored section of
the hall wing adjacent to the wagon way. This is
constructed in a similar manner to the end wall
of the building detailed above. Section DD is the

partition wall between hall and the two storey part of this wing. This is of slightly different construction to the other end of the bay as a door is located at one end. The floor joists for this floored bay run parallel to the main sides of the wing and span between the mid plates.

There is no evidence of there originally being a room above the wagon way. The faces of the corner posts towards the wagon way are free from tenons that would have been provided for mid plates. There is, however, evidence of a room being inserted at some date in the wagon way as there are subsidiary top plates notched under the

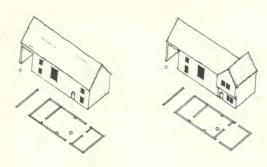


Fig 4 Sun House, Potton: development of plan from hall-house to hall-and-crosswing house.

originals which are morticed for studs.

What was originally the central hall open truss is shown reconstructed and in exploded view in figure 2. Simple chamfers with plain stops run down the principal rafters and along the underside of the collars. The chamfers stop neatly above and below the intersection of the wind braces. The chamfer is also found along the underside of the top plate.

The posts, braces and underside of the beam were fairly extravagantly moulded. Although the braces no longer survive, a conjectural reconstruction can be made which is almost certainly correct. The moulding on the inner face of the post survives as does the mortice for the brace. The post moulding is an ogee and hollow. On the underside of both sides of the tie beam is a hollow moulding. Additionally, on the south side of the tie is an ogee moulding running above the hollow (see inset sections through tie beam). This additional moulding on one side of the tie beam of a hall is common in buildings in the region and usually indicates the side viewed from the "high" end of the hall.

Section AA taken longitudinally through the building, shows the roof construction with the wind braces rising from principal rafters to purlins. The inserted fireplace and floor have been omitted from this section which shows the reconstructed front elevation of the hall wing and also the central truss of the cross wing reconstructed. Also seen in this section is the reconstructed six-light window to the original hall the two-light windows in the front elevation of the two storey element of the hall wing.

Carpentry

The hall top plate is joined with an edge-halved

scarf with bridle-butts and two edge pegs, perhaps the most common scarf joint in Bedfordshire in the period between the late 15th and early 17th century. (fig 2).

Both the hall and cross wing tie beams are secured to the top plates with lap dovetails.

The type of bracing used is uncommon in Bedfordshire. Firstly tension braces terminating into the side of a stud is prevalent in Suffolk and seen rarely in Bedfordshire. Secondly the use of arch braces in the framing, other than under a tie beam is most rare in Bedfordshire in a pre 17th century context.

Conclusion

The most logical solution to the original form of the buildings before the erection of the later cross wing is that shown in figure 4(a) that is a "three cell" four bay house with a wagon way at one end.

The central two bays were the hall. To the south side of the hall, at the high end, would have been the parlour with solar above. To the north of the hall there would most probably have been a service bay with buttery and pantry at ground floor and a chamber over. The cross passage at the north end would have most likely been at the end of the hall.

After the demolition of the north end of the hall and the replacement of any existing rooms at the end of the building by the new cross wing, the form of the building would have been as figure 4(b).

The high end of the hall and its parlour/solar bay would have remained as before. At the low end the service area accommodation is now enlarged, although the cross passage is now through the wing.

There is a substantially larger chamber at first floor in the new wing than there would have been in the previous arrangement, assuming that the site size stayed the same.

APPENDIX

3 Sun Street

At the junction of Sun Street and running along the west side of the square are the remains of a partially demolished, timber framed structure. As is most common in towns, the frame was concealed by a modern brick front and shop window. This thin veneer must have hidden a very

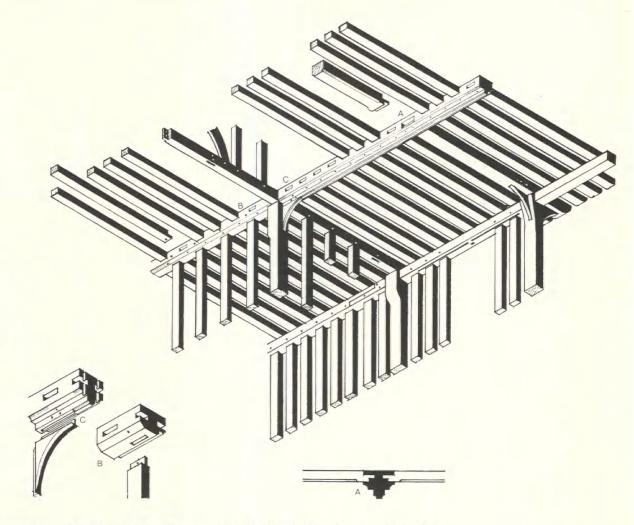


Fig 5 No 3 Sun Street, Potton: isometric view looking from rear and below.

complete late medieval building if the extent of the remaining timbers at ground floor level that were standing at the time of survey are any guide.

At either end the building had been altered so it is not possible to ascertain the original length. There remained sections of 2½ bays at ground level which included the common floor joists and binding joists. An isometric reconstruction is shown in figure 5. This building was well finished with moulded details. We can see that the building was continuously jettied to the street. The southern 1½ bays formed a single room at ground level. The northern bay of the ground floor was divided into two rooms. Shuttergrooves run along the underside of the front mid plate of the centre

bay with a mortice for a window mullion on centre of the bay. There are two bridging joists, one running through the northern bay, the other along the southern 1½ bays. They both tenon into either side of the same joist. Details of the two bridging joists are shown. There is a moulded knee-brace at the northern end of the southern bridging joist. An interesting feature is the splitting of the binding joist either side of the southern bridging joist. The joint used to tenon this into the bridging joist is shown in detail A. A hollow chamfer runs along both sides finished with simple stops. The common joists are all secured with bare-faced soffit-tenons with mortice and peg. A scarf survives in the front mid plate

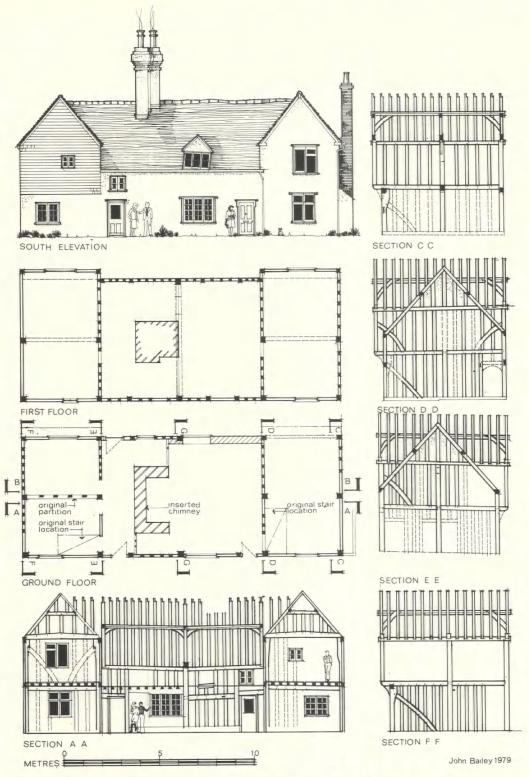


Fig 6 Clawdershill Farm, Shillington: plans, elevation and sections.

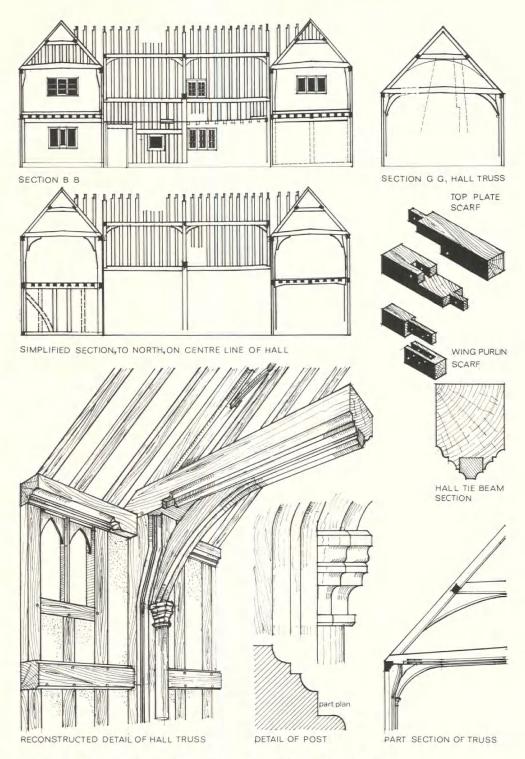


Fig 7 Clawdershill Farm, Shillington: sections and framing details. Scale as figure 6.

and this is edge-halved with bridle-butts and two face pegs, yet another example of this joint so often used in Bedfordshire's buildings. It is unfortunate and frustrating that there is just not enough surviving evidence to enable us to understand the use of this building. The carpentry would seem to indicate a 15th century date.

CLAWDERSHILL FARM, SHILLINGTON

Introduction

Clawdershill Farm is isolated from other early buildings and is alongside and to the east of the lane through Upton End, Shillington. It is little altered apart from external treatment and new windows and is still recognisable from outside as a classic example of a late medieval hall with flanking jettied cross wings. The building recently changed ownership and the new owners kindly allowed a detailed survey to be made. No elucidation of the historical background has been attempted.

The Present Form

Some time during the last century the original rear of the building was made into the present front of the house. The house is in two tenancies and the elevation in figure 6 shows this new arrangement with the two entrance doors. The entire building has been rendered in pebbledash and hung tile is on one end and part of the main elevation. Figure 6 shows the ground and first floor plans of the present building layout. A later chimney stack has been inserted towards one end of the hall and a first floor added. There are various new modern partitions and at the end of the east wing the ground floor has been extended northward. New windows have been inserted on the two main elevations. There have also been chimneys added at either end of the building in the 18th/19th centuries.

Sections AA and BB (figs 6 and 7) are taken longitudinally through the building and show the front and rear internal elevations as they are today.

Original Form

The conjectural perspective indicating the original form of the building is shown in figure 9. The hall is of two bays with presumably a wing containing parlour with solar over at the high end and the service wing of buttery/pantry with chamber over at low end.

There was a single door into the parlour. At the

service end there were two doors leading to buttery and pantry. The cross passage was within the low end of the hall.

Description of Construction

The various elevations, sections and plans have been reconstructed in their original form as far as the surviving joint evidence will allow. In addition, the front and rear elevations have been shown conjecturally in their most probable form.

The original front elevations was to the north. The two bay hall had the high end at the east with the cross passage at the extreme west end. Both service and high end wings are jettied to the north. The service wing was divided into two rooms at ground floor, presumably buttery and pantry. There was a single room at first floor with the stair in the south east corner.

At the high end the cross wing is entered through a door at the south east corner of the hall. There were originally no partitions in this wing at ground or first floor.

The Hall

The standard of carpentry in the hall was high with intricate mouldings to the central truss and top plates. There were also well formed chamfers to purlins and other elements.

The hall roof is one of the few known buttpurlin constructions in the county, the general roof construction in Bedfordshire being clasped purlin. The roof structure is also uncommon in that there are no tie beams at either end. The principal rafters seat directly onto the wall plate (fig 6, section DD). The inner flank walls of the wing form the ends of the hall and stabilise its structure. Top, mid and sill plates tenon into the frame of the cross wings at either end without any form of cross tie other than the conventional central truss (fig 7, section GG). This central truss is elaborately carved with the braces spanning up to the underside of the tie springing from moulded capitals (fig 7). Hollow mouldings run up the principal rafters along the underside of the collar and the purlins. There are curving panels between principal rafter and underside of collar and these also have hollow chamfers. The underside of the tie beam is moulded, as is usual on a building of this quality, more extravagantly on the side facing towards the high end. On this side there is an ogee above a hollow. Towards the low end are two hollows. The mouldings on either side terminate in staggered returned stops.

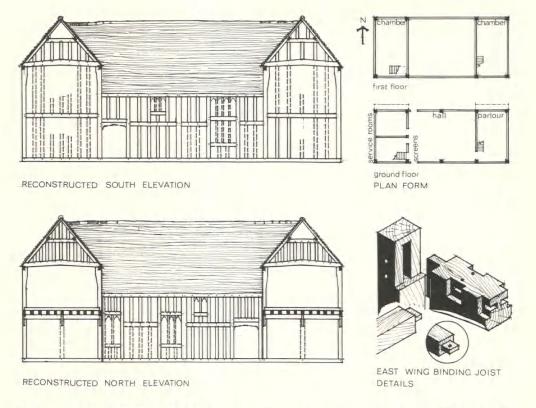


Fig 8 Clawdershill Farm, Shillington: reconstructed elevations, plan form and joint detail. Scale for elevations as figure 6.

The post moulding is shown detailed separately in figure 7 together with a section through the moulding running down the inside face of the post. It is not known how this moulding was terminated at the base of the post.

Both top plates are extravagantly moulded and the elaborate stops executed with care (see detailed drawings (fig 7). Large sections of the front and rear elevations of the hall have been destroyed at low level. Fortunately, on both of the elevations the intermediate full height posts dividing the bays into modules survive. These are distinguishable by being much larger in section than the studs and chamfered. We can therefore, on the drawings, carry these down to the sill and from evidence of mortices in them produce the partially reconstructed elevations in figure 8. The only area where there is some uncertainty is in the front elevation at the lower level of the high end. From the symmetry of the arrangement it seems logical that there may have been two further windows in this bay; these have been

shown in the conjectural reconstruction.

Mullions survive in one window together with the evidence for spandrel panels in their heads. In one instance a section of spandrel survives. This is .25mm thick with a hollow chamfer on the inner face. It slotted into the mullion only. From this evidence we have assumed spandrel panels at the heads of all windows for the reconstructed elevations. Both entrance door frames survive and in the inner face of one the slot for a spandrel panel is visible.

A perspective view of the hall looking towards the high end has been shown based on these conjectural reconstructions of the elevations (fig 10). This must be reasonably accurate except for the windows at the high end front elevations which cannot be proved.

It should be noted that the front elevation is framed by a full height post at either end abutting the flank walls of the wings. This does not occur on the rear elevation. Presumably this was to give additional stiffness where the hall abuts the jettied

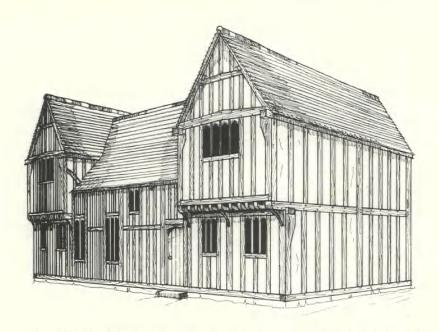


Fig 9 Clawdershill Farm, Shillington: conjectural perspective reconstruction.

wings as the top plate on this face only tenons into a stud and not a full height post as on the rear elevation.

The Wing at "High" End

With the exception of the front, jettied, elevation, this wing could be analysed in full. The side of the wing flanking the east end of the hall is shown in section DD on figure 6, close studded at both first and ground levels with tension braces at first floor between posts and girth. A door at ground floor level leads into the parlour at the south end of the partition. Evidence survives of the rail and spandrel panel at the head of the door. The external wall is also close studded (section CC) but there is not enough evidence to show any tension braces on this elevation at both levels. There is only a brace mortice visible in the ground floor front post. Presumably though, there must have been a symmetrical arrangement. The rear of the wing is infilled completely with studs and there is evidence of internal tension braces at first floor (section AA).

At the front of the wing the ground floor has been demolished in the 19th century. The floor joists survive and from the knee mortice slot in the central joist, we know that there was a stud on centre. First floor studs and possible windows are not visible but the details of part of the gable end can be seen.

A complete roof survives over the wing. This is of clasped purlin construction with principal rafters reducing above collar. Wind braces extend between principal rafters and purlins.

There were no partitions at either first or ground floor and the central truss is open at both levels (simplified section in fig 7). The truss has solid knees at the junction between posts and underside of the tie beam and there are no studs between tie and collar. Simple chamfers with plain stops run along the underside of the tie beam and down the posts. The posts reduce below the binding joist to provide it with an additional seating in this cross wing only. There are nine joists at the front of the wing and the same number to the rear. They tenon in either side of the binding joist and rest on the mid plate at the rear and jetty over the mid plate at the front of the building. It should be noted that the central joist is deeper in section than the others. This is presumably to provide greater rigidity as it does not occur in the other wing where there is a cross partition at ground floor level.

The exact position of the stair between ground and first floor must have been in the same location as the existing stair as the joists over the whole floor are uncut except at this point.

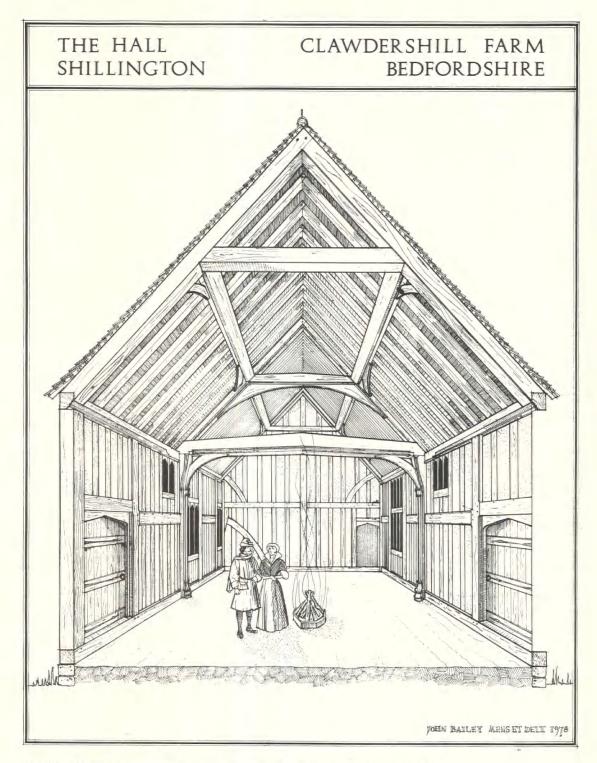


Fig 10 Clawdershill Farm, Shillington: perspective of the interior of the hall.

The Service Wing

The service wing is very similar in construction to the other wing except for its division into two rooms at ground floor, the location of stair and doors, and a slight variation in the disposition of the studs. Although fairly intact, the front elevation details are hidden. Section BB (fig 7) therefore shows little of the original work. To the rear, section AA, the wing was infilled with vertical studs and presumably there may have been tension braces but they are not visible. Details of the side of the wing flanking the end of the hall are shown in section EE. There are studding and tension braces similar to the other wing but in this instance there are two doors from the hall, one either side of the centre post. These doors would have led into the pantry and buttery. A third door appears to have been located at the south end of the wall for access to the stair and first floor as in the present arrangement. The central truss is of similar construction to the other wing, the only difference being the insertion of a cross partition at ground floor, reconstructed in the longitudinal section in figure 7. The first floor has a single chamber. There are nine joists to the front and to the rear, all of the same section.

Carpentry

One of the most interesting features of this building is the combination of the butt-purlin roof of the hall with the clasped purlin roof in the wings. The writer has surveyed another building in the region having both butt purlin and clasped purlin roofs: Charity Farm, Edlesborough, Bucks. Buttpurlin roofs are rare in Bedfordshire vernacular buildings, clasped purlin being the side purlin roof in most general usage with examples dating from the 15th century or earlier to the 18th century. The clasped purlin roof with its simplicity of construction continued to be used after the introduction of another form of butt-purlin roof where the rafters tenon into top and bottom of purlin. This later version of butt-purlin roof came into use in Bedfordshire in the early 17th century. Kempston West End Farm has examples of this form of roof, it retains wind braces but with the reverse curve.

The scarf joint in both wing and hall top plates is edge-halved scarf with bridled-butts and two face pegs.

In both wings the common joists were secured

to the building joists with a central tenon with housed shoulders, sunken butment-cheeks and pegs.

All tie beams are secured with lap dovetails in both hall and wings.

The mouldings to the central truss are of a high quality. The characteristic additional embell-ishment of the moulding on the side of the tie beam facing the high end occurs in this building as at Potton. In fact the moulding to the underside of the Clawdershill tie beam is almost identical to Potton, so is the method of carrying the continuation of the moulding of the brace along the underside of the tie. In both cases a moulded fillet is tenoned along the underside of the tie (fig 7). This method saved carving from the solid of a much larger piece of timber, a detail which would be wasteful of material.

Conclusions

Presumably with the elaborate detailing and high quality of construction this building must be in the manorial class.

It is built in the medieval tradition of hall-and cross wing with the elaborate detailing to the hall truss and distinction between high and low ends. This must surely be of 15th century date.8

ACKNOWLEDGEMENTS

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NOTES

- N.W. Alcock, 'Timber-Framed Buildings in North Bedfordshire', *Beds. Arch. J.*, 4, 1969, 46 and fig 2, other buildings cited personal observation.
- Bedfordshire County Record Office, document HSA 1668 W.
- 3 Beds. C.R.O., documents PE 410, 413-415.
- 4 L.M. Marshall, 'The Rural Population of Bedford-shire, 1671-1921, B.H.R.S., 16, 1934, 71 section 31; D.B. Baker, A. Cox, E. Marten, Bedfordshire Historic Buildings, 1975, 54. The rear stack to the wing is a late addition.
- Beds. C.R.O. document CIM 2.
 Alcock, 1969, 44, fig 2, pl. 6-7.
- 7 D.H. Kennett and T.P. Smith, 'Crowhill Farm, Bolnhurst', Beds. Arch. J., 12, 1977, 57-84, esp. 66-70 with figs 6, 7, 9. This is also a hall and crosswing building.
- 8 Paper submitted May 1979.

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