Vale and Downland Museum – Local History Series

Timber Framed Buildings in Wantage

by John Garnish

Nos. 36 34 32

Grove Street, Wantage

An unusual opportunity arose during 1982 to carry out a detailed examination of a timber-framed house in Grove Street. A local builder, Mr T O'Hara, undertook a major renovation of nos. 32 and 34, in the course of which the interior of the property was completely stripped. This revealed a basic timber box-framework which was clearly much older than might have been expected from the Victorian facade on this row of cottages, and he offered me the chance to look at it. Only rarely is it possible to get such a complete view of a timber-frame house, and in the limited time available during the building work I surveyed and photographed as much of the structure as was accessible. I am grateful to the occupiers of no. 36 who were kind enough to let me examine the interior of their house also, thereby allowing a much more complete understanding of the overall structure. This note records the main features of the building and offers some interpretation. The major dimensions are reported by way of a scale plan and elevations in metric units, but I have retained Imperial units for the sizes of timbers, etc.

The basic building technique consists throughout of two-storey box-frame structures mounted on coursed brick or chalkstone walls some 70-85 cm high. Construction of the timber frame seems to have taken place in three phases, distinguishable primarily by the

dimensions and quality of the major structural timbers. The ground plan is shown in Figure 1, on which I have also imposed an indication of my estimate of the dates of the main phases of building. The building has undergone many alterations during its lifetime, some of them fairly horrific in their disregard for - or ignorance of - the basic integrity of the structure, but the major stages of development proved fairly easy to disentangle. In view of all the alterations that have taken place over the years, and the inaccessibility of parts of the building, the perspective drawings of the structure which illustrate this note are somewhat idealized but represent a best estimate of the main characteristics prior to the Victorian facelift. The complete assembly is shown in Figure 2.

The structure behind the present Victorian facade proved to be a single entity, the divisions between the current nos. 32 to 36 Grove Street (and, probably, part of 38 as well) bearing little or no relationship to the original building layout. In terms of the modern division into three dwellings, the separation between nos. 32 and 34 at ground floor level is achieved by a modern block wall cutting through the southern bay of what I have called Phase 1 (see Figure 1), while no. 36 occupies the bay immediately north of the chimney. Viewed from the outside, however, a bridge at first floor level on the northern end of the terrace connects no. 36 to no. 38. I took this at first to be a piece of infilling "over the entry" (quite a common practice in the seventeenth century), but examination of the exposed timbers in the passageway between the two houses shows a well-chamfered bridging beam which matches that within no. 36. This was surely once an interior timber and, together with the general shape of the ground plan and the appearance of the complex of houses from the rear (east) side, suggests that this passage has been cut through what was the original northern-most bay. The inference is that the remaining portion of the northern bay forms part of no. 38.

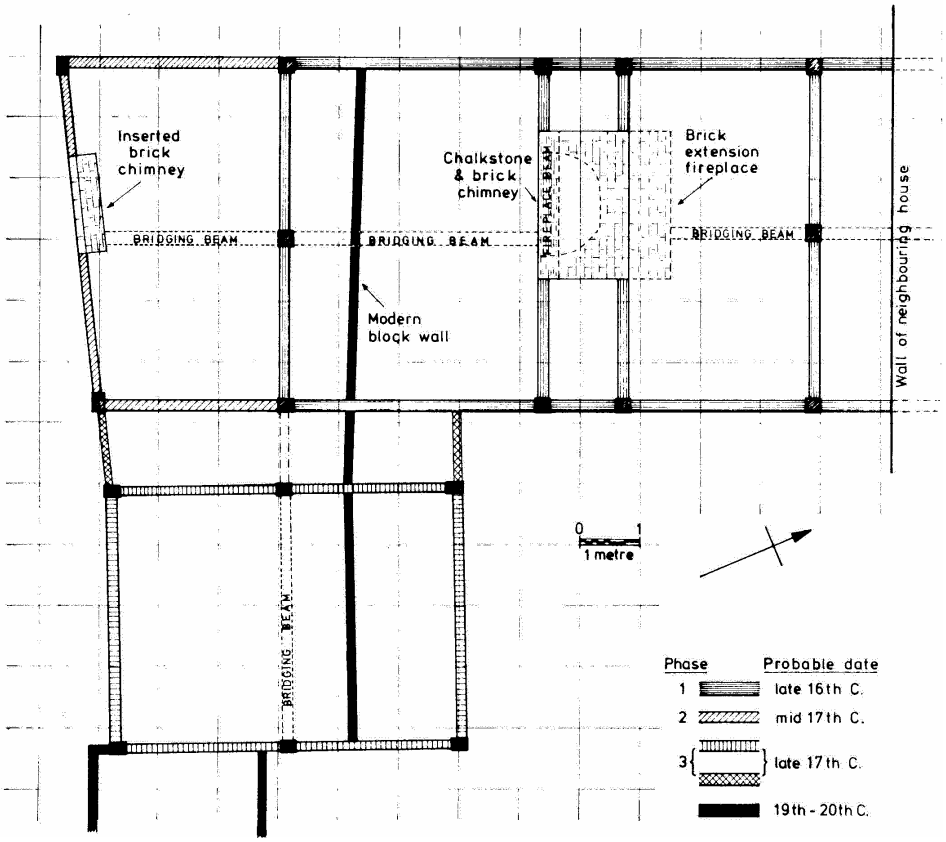

Figure 1. Ground plan and possible dates of structure

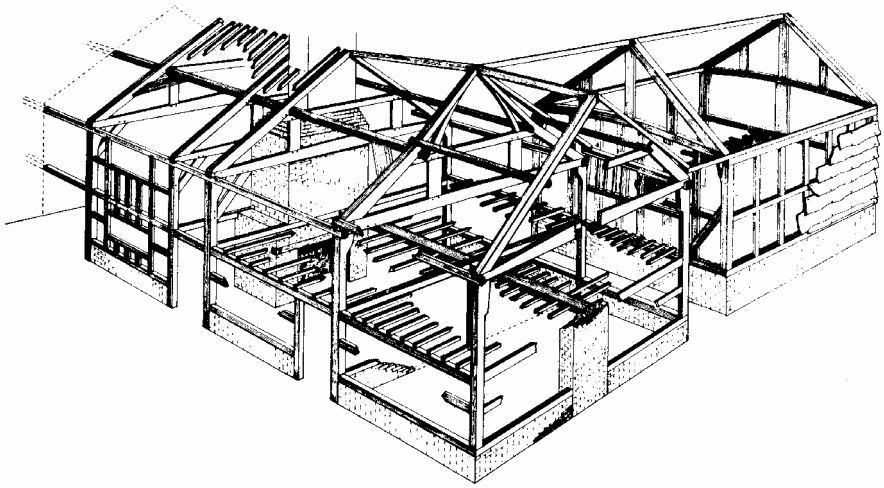

Figure 2. Perspective view (looking north-east from Grove Street)

Phase 1

The original part of the building, identified by its regular plan, uniformity of structure and quality of timber, has been designated Phase 1. It is rectangular in plan, and consists of at least two and, as suggested above, probably three main bays, together with a narrow bay containing a large chalkstone and brick chimney.

The main wall posts consist of 9" square oak timbers with sawn jowls at the upper end to accommodate the junction with wall-plate and tie beam. The joint between wall-post, tie-beam and wall plate is of the normal lap dovetail and jowl tenon type -see Figure 3a.

I was unable to establish whether the posts originally started at ground level (as is shown in the drawings) or stood on the 7" x 9" sills on the base walls. The wall-frames were originally divided up by lighter timbers into rectangular panels, typically 2' 9" x 3' 6". These panels were then filled with wattle and daub, the latter incorporating horsehair. Little of this original walling remains, the front (west) wall in particular having been largely replaced by the Victorian bay windows and the extra front doors.

The roof trusses are of the clasped purlin type, with small queen posts between collar and purlin. The tie beams are 7" wide, with a depth of nearly 12" in the middle of the span tapering to about 7" at the eaves. The principal rafters are 7" deep and 5" thick. The present shape of the southern-most cross-frame is shown in Figure 4a; although the roof truss of this frame has been distorted by later building (see below), the original shape (and that of the other cross-frames of Phase 1) can clearly be inferred.

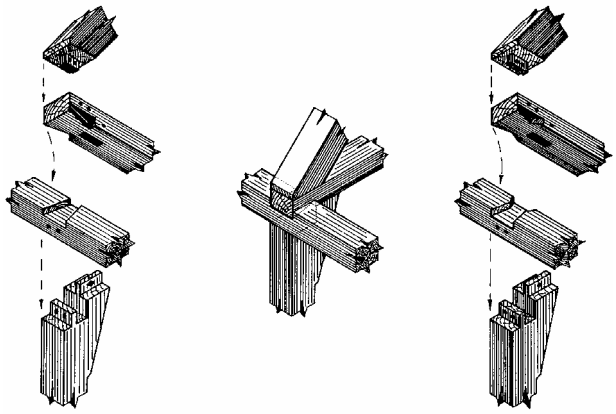

Figure 3 Wall post / tiebeam / principal rafter joint
(a) normal single dovetail (b) twin dovetail

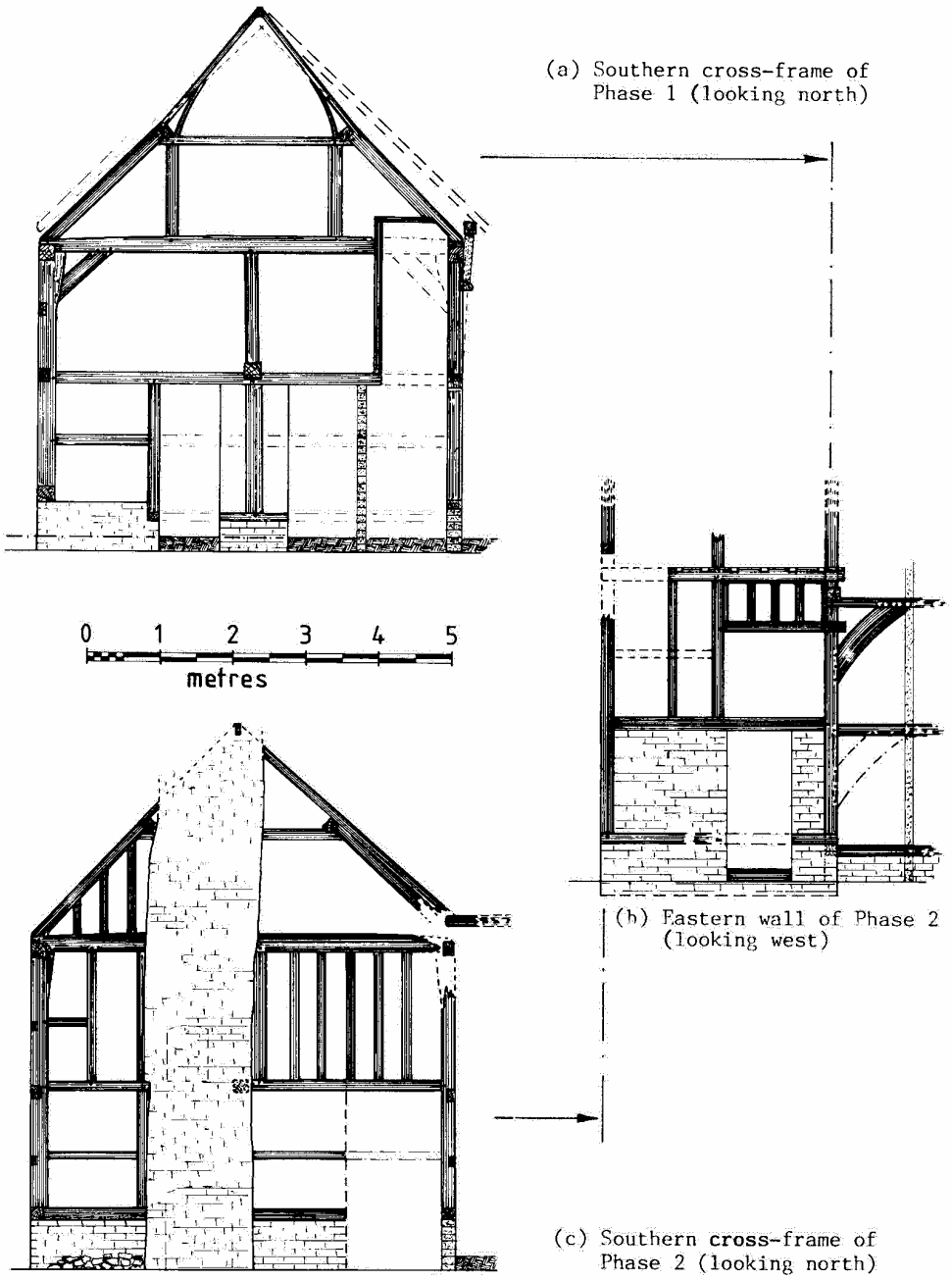

Figure 4 Structures in Phases 1 and 2

The surviving common rafters are 4" square, halved or tenoned together at the ridge. There is no ridge timber (see Figure 2).

Windbraces consisting of 12" x 2" timbers can still be seen in various parts of the building - between wall post and tie beam on several of the cross frames, between post and both wall sill and girdling beam (the side timber supporting the upper floor) at the south-east corner (Figure 4 b), and between principal rafter and purlin in the north-west corner. It seems reasonable to infer that such braces occurred at all such points in the original structure.

The casing of the chimney consists of trued chalkstone blocks some 6" x 12", extending to roof collar level. The stack tapers above this point and is built in brick. The fireplace is faced and lined with brick, the oldest of which have dimensions of about 9" x 4½" x 1¾".

The stack is almost 5' deep, while the fireplace in the southern bay is 3' 9" deep. The original chimney was single-sided, therefore. At some later date, an additional fireplace was built on the northern side of the stack (now the living room of no.36).

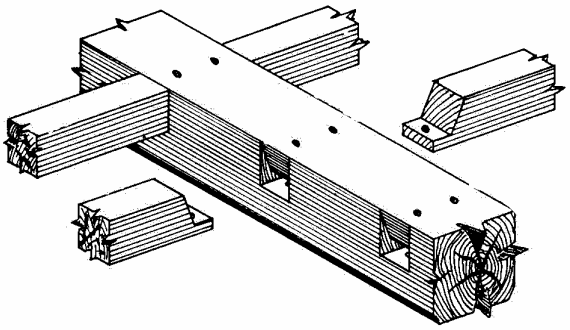

Figure 5 Soffit tenon joint between joist and bridging beam

Internally, the most notable feature remaining in the southern bay is the bridging beam, 9" square and 13' 3" long, with its inner end supported in the chimney breast. It is well chamfered, and the floor joists are jointed into it using a soffit tenon with diminished haunch as shown in Figure 5. This type of joint, described by Hewett (1980) as "the ultimate joist end joint", provides maximum mechanical efficiency and is dated by him from 1510 to the end of the seventeenth century.

A similar bridging beam, again using the same joist end joints, occurs in the northern bay (no. 36). Here, however, the outer (northern) end of the beam has been shortened; the chamfer stop occurs only a few inches from the present end, which has been built up and rests on an inserted chock. An additional fireplace has been built onto the north side of the chimney, and this may account for the disturbance to the beam. The remaining beam in the external passageway to the north, mentioned above, shows no such disturbance.

It is unclear whether all these bridging beams are contemporary with the original structure. The most northerly almost certainly is, because of the difficulty of tenoning such a beam between the cross-frames after they have been erected, but two other possibilities exist for the remainder of the structure:

- the original building could have consisted of a northerly two-storey solar/service bay plus a two-bay open hall with a smoke - or smokehood - bay in the centre. If this were the case, the floors in the open bays would have been inserted during the later building of the chimney. There is some evidence that this might have been the case as some timbers of the cross-frames appear to be embedded in the chimney structure. This has not been checked out conclusively, however, and it must be admitted that a central smoke bay is less common than one on the end of a building. Moreover, no sign of smoke blackening could be seen on the remaining roof timbers.
- more probably, the chimney was built at the same time as the timber frame. If so, the bridging beams - and the two-storey construction - would have been part of the original plan.
- Of these two possibilities, the first would suggest an earlier date for the basic structure than would the second. The dating of the various phases is discussed later in this note.

Phase 2

The next major phase of building consisted of the addition of a further bay on the southern end. This bay has a tapered plan, clearly built to conform to the boundaries of the site. Its relationship with Phase 1 is shown in Figure 6.

The quality of the timber is generally poorer than for Phase 1. Only the south-west wall post remains, the top half of the other, at the south-east corner, having rotted away as a result of long-standing leakage from the roof valley above. These posts definitely do rest on the sill beams, which are mounted on base walls consisting of 4 courses of brick over rough chalkstone. They are rectangular in section (about 8" x 7"). The remaining jowl is of a different shape from those in Phase 1 (Figures 4a & c).

The wall frames on the south and west sides were again filled with wattle and daub panels, as in Phase 1. The ground floor wall on the east side is now brick-built, though this appears to be a later addition. The girdling beam in the east wall is tenoned into the south-eastern wall post of Phase 1, some 2" higher than that of the Phase 1 beam on the other side of the post, and the post has decayed badly around the resulting through-mortice. The brick infill may therefore have been inserted to give additional support to the upper floor.

Very little remains of the original southern roof truss (and none of the rest of the roof structure). Only the lower sections of the original principal rafters still exist, as the roof line was raised at a later stage (see below). The tie beam, cut by a later full-height brick chimney, is lighter than those in Phase 1 and measures only 7" deep by 4" thick.

The corner joint is of an unusual pattern with a double dovetail (Figure 3b); it was visible because the western wall-plate had been replaced - presumably when the roof-line was changed - with a thinner plate which left the dovetail exposed on the tie-beam (and significantly weakened the structure'). The original eastern wall-plate does still remain, and is notched along its upper edge to take the common rafters. These notches would take 4" rafters at 15" intervals.

The upper floor joists are again supported on a bridging beam, and again employ the soffit tenon with diminished haunch found in Phase 1 (Figure 5). The northern end of this bridging beam is halved and tenoned around and into the central upright post of southern cross-frame of Phase 1, while the southern end is buried in the brick chimney. This chimney, with fireplaces on both floors, seems to be a much later addition and - along with the brick infill in the eastern wall may date from the Victorian rebuilding.

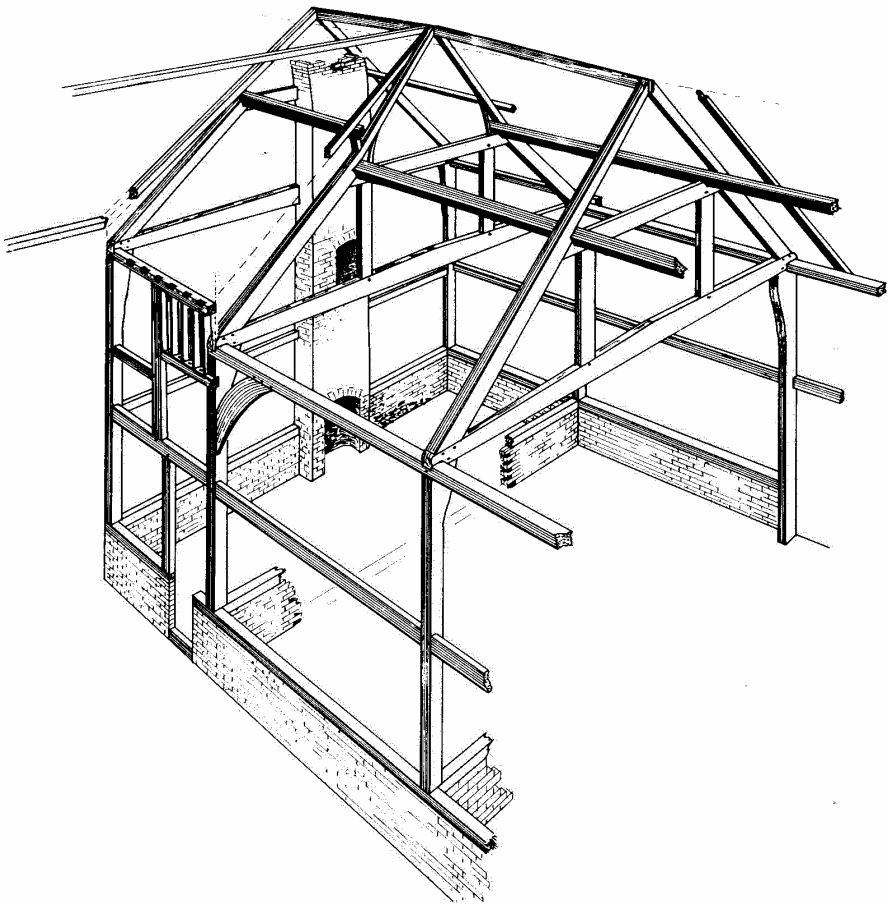

Figure 6 The relationship between Phases 1 & 2 (looking towards the south-west)

When Mr O'Hara stripped the upper part of the eastern wall, however, he uncovered a remaining window frame which is almost certainly contemporary with the original structure. It is built into the upper quarter of the wallframe immediately below the wall-plate (see Figures 4b and 6), and consists of three moulded mullions within a moulded frame. The mouldings are of almost symmetrical ovalo section (Figure 7). Centred within each bay of the window, a hole is drilled in both transom and sill, presumably as part of the arrangement used to retain the glazed panels. It is tempting to suggest that the panels may have pivoted around these sockets, but there is no evidence that such was the case.

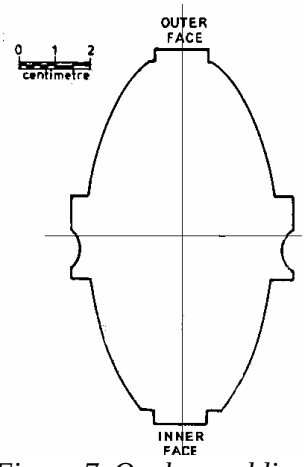

Figure 7 Ovalo moulding

The shape of the mouldings and the general proportions of the window point to a date not earlier than the late sixteenth century and, bearing in mind that rural development usually lagged behind that of cities, probably mid-seventeenth century.

Phase 3a

The next phase of building is represented by a separate single bay building, located to the east of the southern end of the main house. It was separated from the main house by a passageway about 4' wide, and its axis is roughly at right angles to that of the house.

The wall frames again stand on chalkstone walls, 2' 9" high and 12" thick, but the carpentry is much rougher. Except for the tie beams (6" thick and 13" deep in the centre, tapering to 7" deep at the corners), the sills and wall-plates, there are no horizontal timbers in the structure, all the framing being vertical (Figure 8). The southern wall, which was the only one exposed to view during this survey, was covered on the outside with horizontal weatherboards 15-18" deep (see Figure 2). At a later date, these were in turn covered externally with lathe and plaster. This part of the building now possesses an upper floor, but was probably open to the roof when built. The bridging beam is not tenoned into the cross-frames but rests on samson posts fitted to the central upright members of the cross-frames.

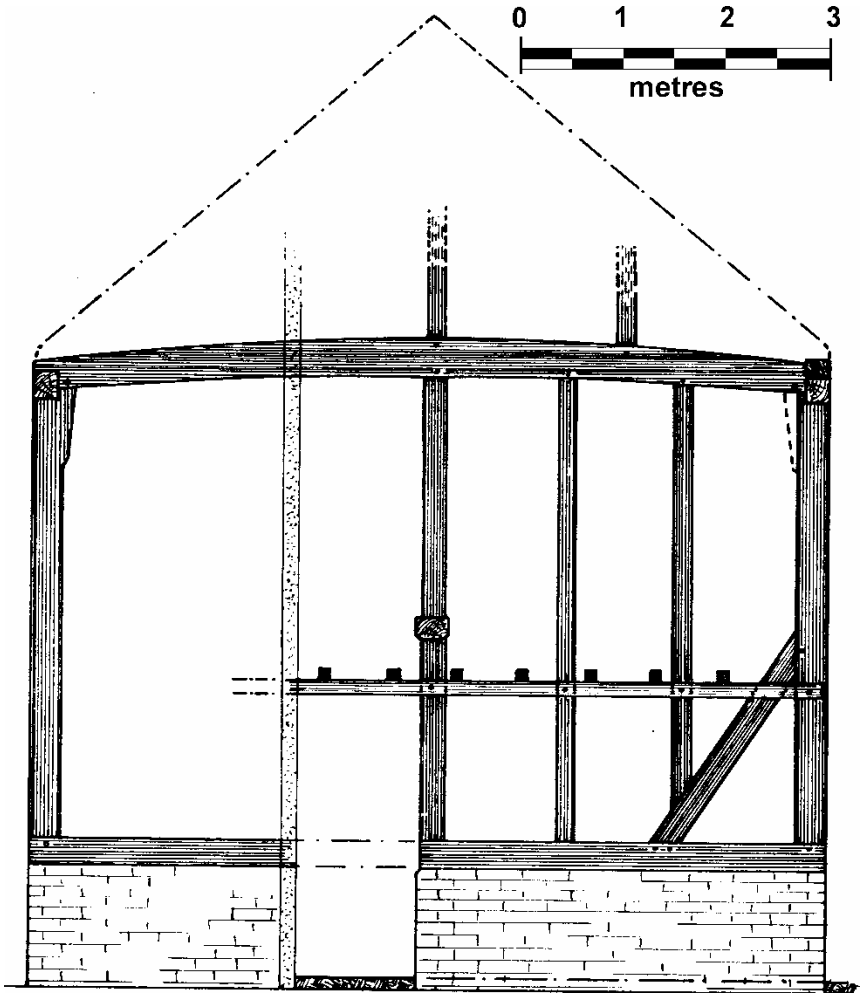

Figure 8 Western cross-frame of Phase 3 (looking east)

It seems likely, therefore, that this was an outbuilding or barn used for storage rather than living accommodation. The fact that it stands only 4 feet from the window in Phase 2 (see Figures 1 and 6), and completely obscures any view that it might have had, suggests that it post-dates Phase 2 by a substantial period - probably at least 50years.
At a later stage again, as already mentioned, an upper floor was inserted. In this case, the joist end joint differs from that used in Phases 1 and 2. It used a face-lapped half dovetail with housed shoulders (Figure 9), which is at first sight a more sophisticated joint than the soffit-tenon type used in the other phases. In fact, it is mechanically much inferior to the joint shown in Figure 5, as it removes compression timber from the bridging beam and gives little support to the joist if shrinkage should occur. It is, however, less labour-intensive as it is much quicker to cut and so represents a common progression in jointing techniques.

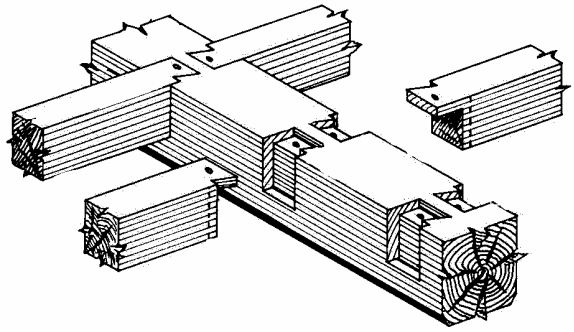

Figure 9 Half-dovetail joist joint in Phase 3

It is of interest to note that this same joint occurs throughout the building which now houses the Vale and Downland Museum, the earliest part of which may be tentatively dated (from the leases listed in the Bec Herluin Catalogue) as pre-1660 and the later parts of which are probably late eighteenth century. On the other hand, other examples of the earlier soffit-tenon joint can be seen in the 'Lemon Plaice' fish and chip shop in Mill Street; again, an obviously early building.

Phase 3b

As a final stage of development, the building was converted into the form we see now, of a single unit. The Phase 3 building was re-roofed - either at the same time as or after the floor was inserted - with new wall plates laid on top of the originals and carried through to meet the (upward projection of) the wall line of Phase 2. The original principal rafters were left in place. One at least of the new purlins is a re-used common rafter, as are some of the replacement rafters in the new roof on Phase 2, where halved joints from the original ridge position now appear at the eaves end of the rafter.
The problem - and the presumed reason for re-roofing Phase 2 - was that the ridge line of Phase 3 is higher than that of Phases 1 and 2. This has been accommodated in the cross-frame common to Phases 1 and 2 by bending the principal rafters upwards at the weak point where they are thinned to clasp the purlins. Light bracing timbers were added to hold the upward bend (see Figure 4a), and ridge beams installed in Phase 2 and the southern bay of Phase 1. New principal rafters, of much thinner timber, were then laid over the originals in Phase 2 to fair out the slope of the roof, and the ridge beam of Phase 3 extended to meet that of Phase 2 (see Figure 2). At (presumably) the same time, the resulting covered passageway between Phases 2 and 3 had an intermediate floor installed to complete the link at first floor level.
It is possible that one of the other examples of violence being inflicted on the structure dates from this period. As shown in Figure 4a, a doorway has been installed in the southern cross frame of Phase 1 at upper floor level. This removed the windbrace, cut right

through the main tiebeam and removed half the depth of the principal rafter. Remarkably, this seems to have had no detectable effect on the stability of the house, as no relative movement seems to have occurred. The fact remains, however, that nothing other than the extended walls of Phase 3 now prevents the south-east corner of Phase 1 from collapsing outwards.

Later developments

Leaving aside the apparent incorporation of the northern bay of Phase 1 into what is now no. 38, the date of which event has not been established, the next major development appears to have been the division of the structure into the three present dwellings. As the deeds of the dwellings date from the 1830s, this is probably the date of that conversion. The three bay windows at ground floor level appear to be of a later date, however, perhaps late Victorian. Finally, a single storey brick structure incorporating bathroom and lavatory has been added to the back (south side) of' Phase 3, probably around the turn of the present century.

Dating

It is not possible to assign an unambiguous date to any part of the timber structure, but comparisons of building style and some tentative identifications from documents allow a possible chronology to be established.

First of all, the soffit-tenoned joists in Phases 1 and 2 suggest that they predate the Museum building, giving a latest date of (say) 1650. This is consistent with the style of the window frame in the south wall of Phase 2. According to Hewett, however, this form of joint first appeared in 1510 - in King's College Chapel, Cambridge. Its appearance in rural Wantage seems unlikely until perhaps thirty years later, giving an earliest date for the floors of (say) 1540. If, however, the floors were a later insertion, Phase 1 at least could be older.

Little can be said about the dating of Phase 3, other than that it is unlikely to have been erected less than about 30 years after Phase 2 (because of blocking the window). The late seventeenth century seems a likely estimate.

Turning now to the documentary evidence, the building may be identified tentatively as that referred to in Stephen Anger's will of 1596 as "lately re-eddifyed and builded" (Anger, 1596). If so, the form of words would suggest modification of an existing building - in this case, perhaps the insertion of floors and/or the addition of Phase 2.

Though these various pointers still leave a fair margin of error, the overall conclusion is that this structure in Grove Street represents a Tudor to Jacobean complex.

REFERENCES

- Anger, Stephen (1596) - will dated 3.7.1596 (probate 27.9.1597) -Oxford Record Office ORO 83/1/06:
- "... my Messuage or tenement garden orchard and backside scituate lying and beinge in wantinge aforesaid in the streat there called Abinton streat otherwise Lowshill ... and also all that Close adioyninge to the est part of the same and also all that Cottage *adioyninge to* the Sowthend of the same Close Latelie *reeddifyed and* builded, which Close shoteth at the north end apon the hyewaye..."
- Hewett, Cecil (1980) - English Historic Carpentry-, Philimore; p.282

Wantage Grove Street - 1960s? - Nos.34, 32 (renovated 1975), and 30 (16th C, was "Rose & Crown"). (Surveyed J Garnish 1982) (st070.jpg)

Wantage Grove Street - 1976 - Nos.32, 34, 36
1931 - No.32 L Parkin, No.34 E E Rolls, No.36 F W Rolls
1924 - exors. James Welch, town crier, toll collector, bill poster. (st073.jpg)

This article was first published in the "The Blowing Stone" Spring 1988 as "That Cottage …Latelie Reedified and Builded " and was later re-published by John Garnish.

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