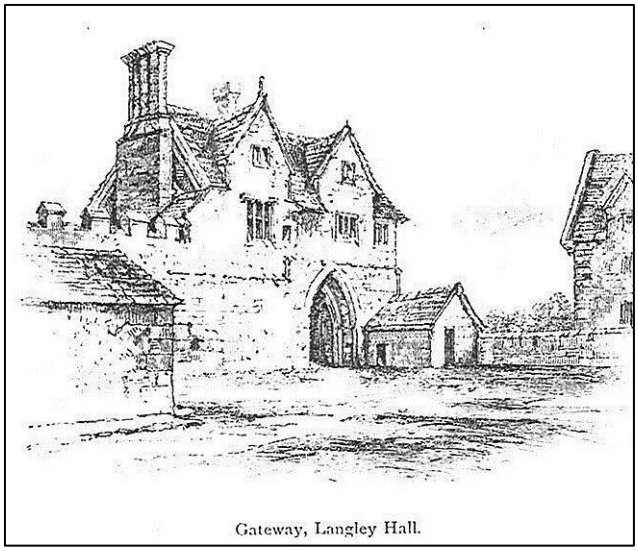
The Landmark Trust

LANGLEY GATEHOUSE

History Album



Gateway, Langley Hall.

Researched and written by Charlotte Haslam

Updated in 2015

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BASIC DETAILS

Built	**c1610, adding to an early 14th-century building**
Listed	**Grade II***
Owner	**Langley Estate**
Landmark tenure	**Long lease**
Let for first holiday	**1993**
Repaired	**1992-1993**
Architect	**Andrew Thomas**
Builders	**Treasure & Son**
Site Foreman	**Mervyn Higgins**
Quantity Surveyors	**Bare, Leaning and Bare**

Contents

Summary 5

Dating Langley Gatehouse 7

Description
- The west front 9
- The north end 10
- The east front 10

A brief history of the Langley Buildings
- Langley Hall 13
- Langley Chapel 16

The repair of Langley Gatehouse
- Introduction 21
- Philosophy 23
- Roof and walls 27
- The west front 31
- The timber frame 33

Inside the gatehouse 43

The Repair of Langley Gatehouse, SPAB News
- Vol 14, 1993 50

Langley Gatehouse, east elevation

Summary

Langley Gatehouse formerly protected the entrance to Langley Hall, a rambling house of varied date which was demolished in the 1870s. In its place, a new farmhouse was built outside the once walled and moated enclosure. The origins of Langley Hall were medieval, as its defences show. These are visible as earthworks east and south of the site, possible remnants of a moat, and in the gatehouse itself. Here, the lower part of the west wall and the gate arch belong to a curtain wall of about 1300, which carries on a short way north.

Langley at that time belonged to the Burnells, after whom the neighbouring village and castle of Acton Burnell are named. By 1400, however, Langley had passed by marriage to the Lees, whose main seat it became. In 1591, Langley was inherited by Humphrey Lee, who besides being Sheriff of Shropshire in 1600, was made a baronet by James I in 1620. He enlarged the Hall and the chapel, and it is now clear that he did the same for the gatehouse, in about 1610. On top of an earlier, possibly single-storied building, he added what amounts to a small house, a late flourish in a tradition of grand pseudo-defensive entrances that began in the Middle Ages. Inside the gatehouse, the rooms on the first floor were of good quality, warmed by fires, so they were almost certainly for living in by an officer of the household such as a steward or important guests.

Sir Humphrey's son, Sir Richard, had no son, so on his death Langley was inherited by one of his daughters, who was married to Edward Smythe. The Smythes lived at Langley for a time, but by 1700 had moved to Acton Burnell. Langley Hall itself became a farmhouse, and the gatehouse was used for storage, and perhaps as a dormitory for farm servants.

In this state it remained into the 20th century, occasionally repaired and altered in small ways to suit some new need. Thereafter, decay predominated, until the building was to all intents and purposes a ruin. From this state it was rescued in 1978 by the Department of the Environment (DoE), which proposed to take the gatehouse into guardianship, and erected scaffolding around it. Only minor repairs had been carried out, however, when work stopped due to a change in government policy on guardianship monuments.

In 1986, English Heritage approached the Landmark Trust with a proposal for a joint scheme to repair the building and provide it with a new use. After lengthy negotiations between all the parties concerned, including the Langley estate, Treasure & Son started work in January 1992, under the supervision of architect Andrew Thomas. The gatehouse was furnished in July 1993.

Restoration by the Landmark Trust

When building work started in 1992, the scaffolding which had been put up in the 1970s was itself something of an ancient monument, and was highly unsafe. The first job was therefore to dismantle this, and replace it with something more substantial. Props had already been inserted to hold up the plaster ceiling in the central parlour, but further props were now added to hold up the northern end where it had been weakened by the removal of part of the ground floor front wall. This was all the more urgent when it was discovered that the whole north east corner was supported by an ancient wine bottle wedged beneath the worn out foot of the corner post.

The load on the walls was greatly reduced when the stone slates were stripped off the roof. These slates are one of the best features of Langley, and come from Harnage, near Shrewsbury, a sandstone with a lot of fossil material. The quarry closed long ago, but fortunately Treasures had a supply of second hand ones to make up for those that were broken or missing. Once the slates had been stripped the roof structure itself was patched and repaired, before the slates were refixed. They are graded by size with the largest at the bottom, and round the gables they form "swept" valleys, curving round the angle without a break. There are no gutters, the deep eaves shedding water away from the walls beneath.

Meanwhile much activity had been going on below. The west front was repointed, with a new mortar of lime and sand, to match the old. A moment of drama was provided when part of the medieval wall collapsed, leaving a hole the size of a man. The west windows, which had been bricked up since the eighteenth century, were unblocked and reglazed. Finally the great oak doors were fitted, based on those that can be seen in old watercolours.

The repair of the east front had its exciting moments too. The plan was for the whole structure to function properly again, but before this could happen, the sagging framework had to be brought back to its true level. Only then would each post and rail and brace work together in mutual support. The frame at the north end had sunk by about 10 inches, and had to be carefully jacked up again, a slow and nerve-wracking business - calmly masterminded by the foreman Mervyn Higgins. Before work started, detailed drawings of the frame had been made, giving each timber a number, to match a list of repairs for each. Some needed new ends, some a piece in the middle, others were missing completely. Seasoned oak was used for small repairs, but where a major timber had to be renewed, green oak was used, as it would have been originally. Where possible, the frame was repaired without dismantling it. The infill panels, where they were early lath and plaster or later brick, were simply repaired. Where there was no infill, or brick had to come out to allow repair of the surrounding frame, it was replaced in new lath and plaster. The building thus retains the evidence of its chequered past.

A new window was inserted to light the parlour over the gate passage. There had been a window here originally, but this whole section was later rebuilt. New windows were also inserted in the south end, to light the kitchen and bathroom above. Inside, a new stair has been inserted, cleverly designed to fit the rather narrow space available to it. It seems that the original builders gave themselves more room by allowing the partition to the first floor bedroom to divide the west window in two, but we felt it was better undivided.

The parlour was originally panelled, and now is again; and its plaster cornice has been repaired. The floors, where they existed, have also been repaired. In the kitchen and the attics, however, they were missing entirely, and here new boards have been fitted. The rooms have all been furnished and decorated in a plain and simple manner, for the important guests who now occupy them.

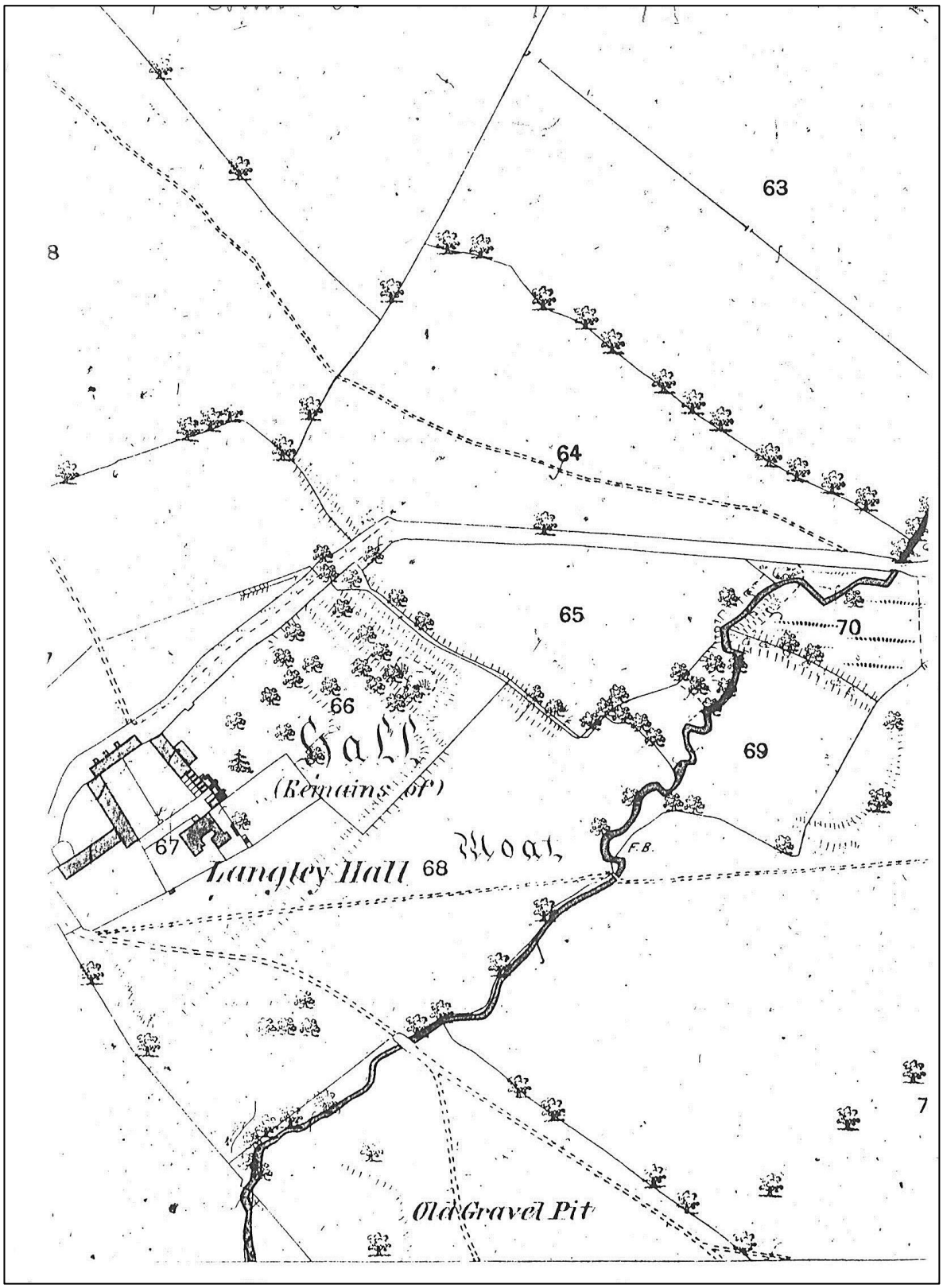
Dating Langley Gatehouse

As part of the repair of Langley Gatehouse, the City of Hereford Archaeology Unit was asked to make a close examination of the building, to establish its true history and development. The purpose of this was partly to guide the work itself, both by revealing areas of particular interest and by establishing the form of missing detail.

Another reason for the new survey was the confusion that existed over the dating of the gatehouse. For most of the 20th century, it has been taken to be a building of about 1600, on a medieval base. This was still the view of the *Victoria County History*, of 1968, which suggested that the lower stonework and arch were medieval, and most of the timber-framing late Elizabethan.

Then in 1970 an outline survey by M. Moran was published in the *Shropshire Archaeology Newsletter*, which in addition to dating the gate arch to the mid-15th century, assigned the timber framing to two separate periods, the northern third being a later addition. This view was taken still further in a more detailed structural survey made by I. Ferris with the Birmingham Field Archaeology Unit, in 1987. The curtain wall was dated to around 1300, the timber framing to two periods in the 15th century, and the upper stone facade on the west side of the gatehouse, with the arch itself, was altered sometime after 1600.

Both surveys were hampered by the precarious state of the building, and the collapsed, and therefore distorted, levels of the framing at the north end. Neither seemed to provide an entirely satisfactory answer. In 1992 a further report was compiled by Richard Morriss of the City of Hereford Archaeology Unit, made with full access to the interior and aided by dendrochronology. A copy of it is in a separate folder, as is another report by Shropshire Archaeology Unit, which carried out excavations on the site at the same time. The following account summarises these findings.



1st edition Ordnance Survey map of 1882

Description

A cause of the earlier confusion over the dating of the gatehouse lay in the complete contrast between its stone outer face and its timber-framed inner face, and the difference in the pattern of the timber-framing itself at the northern and southern ends of the building. It seemed highly improbable that all these could be part of a single design.

Examination of the main posts and frames that hold the building together do show that it was all built at one time, however, and is, to the north of the gate arch and from first floor up, a single unified structure, front and back. Dendro-dating of some of the main timbers provided a likely building date of 1610, using oak felled about 1608. All the same, there are still some puzzles, and evidence of a change of mind even during construction.

The west front

From the west, or farmyard, side, the gatehouse is straightforward enough. There is a clear difference between the masonry at the bottom and at the top, and the division coincides with a line of projecting stones, known as a stringcourse, designed to throw water away from the wall. The rougher masonry below the stringcourse belongs to the medieval curtain wall, while the more regular work above belongs to the Jacobean rebuilding. The gate arch itself is also medieval, with mouldings that date it to about 1300. The walls which line the gate passage, which once ran on 10 ft. to the east, also date from this time.

The curtain wall runs on for a few feet north of the gatehouse, and until the early 1960s, when it was pulled down to make way for a farm building, ran on further again, and still had crenellations. A drawing of the gatehouse in the Bodleian Library, Oxford, shows the end of this wall turning to the east, to enclose the

north side of the fortified manorial site. Its footings, and the moat outside it, were found by archaeologists in 1992.

The north end

On the north west corner is what looks like a later addition squeezed in between the curtain wall and the north chimney. This is a garderobe or privy, and is part of the Jacobean rebuilding, although apparently stuck as an afterthought onto the completed, or partly completed, north wall.

The north chimney itself is clearly Jacobean, with its decorative brick top. The framing to its left, with diagonal braces, is typical of around 1600, and matches that on the front of the building. Richard Morriss points out that the posts beside the chimney, remarkably, run continuously from the ground right up to the tie beam, the horizontal beam supporting the roof trusses.

The east front

As already noted, it is now thought that the whole east front at first floor level, and to the north of the gate arch, is of one build, dating from about 1610. Besides the consistent results of dendro-dating from the main timbers, Richard Morriss based his conclusion on the very complete sets of carpentry marks found on all the timbers, from roof trusses to floor joists; and also on the lack of evidence that the northern third, or bay, was an addition, as had been suggested by other specialists.

For the northern bay to have been added, the truss on the line of the cross-frame or wall on either side of the parlour chimney would have to show signs of exposure to the weather. The outer face of the truss shows no sign of this; moreover, the wall-plate (the beam along the top of the wall) continues over the eastern post of this frame and as far as the northern gable.

Now that the whole design has been restored and can be properly appreciated, the different patterns that seemed random and accidental can be seen to have some unity. The close studding in the southern gable is echoed in the section below it, over the arch, and in the ground floor frame to the north of the arch. The square panels at the southern end (and on the south elevation) are in fact the same as those at the northern, but without the decorative diagonal braces. The extra decoration of the northern end was probably intended to show that the room inside was more important. The impulse of hierarchy in architectural design was still dominant at this time, the newer rules of symmetry not having reached Shropshire.

The lower level of the floor at the northern end was probably for the simple reason that, while the first floor height of the rest of the building is dictated by the gate arch, here this was not the case. This made it possible to have rooms of more equal height, and also made it easier to fit in a stair.

One of the mysteries of Langley is visible just below the roofline of the building. Here the tie beams of the roof trusses project awkwardly through the gables, their ends showing on the face. These would suggest that up to this point, the plan was to build the gatehouse with a straight-pitched roof, like the gatehouses of Bromfield Priory or Stokesay Castle. However, when the main trusses were already on the building, but before any further preparation for the roof had been completed, there was a change of mind. The roof was given the two cross-gables which distinguish it today.

Langley Hall in 1789. Rev. Williams

A brief history of the Langley Buildings

Langley Hall

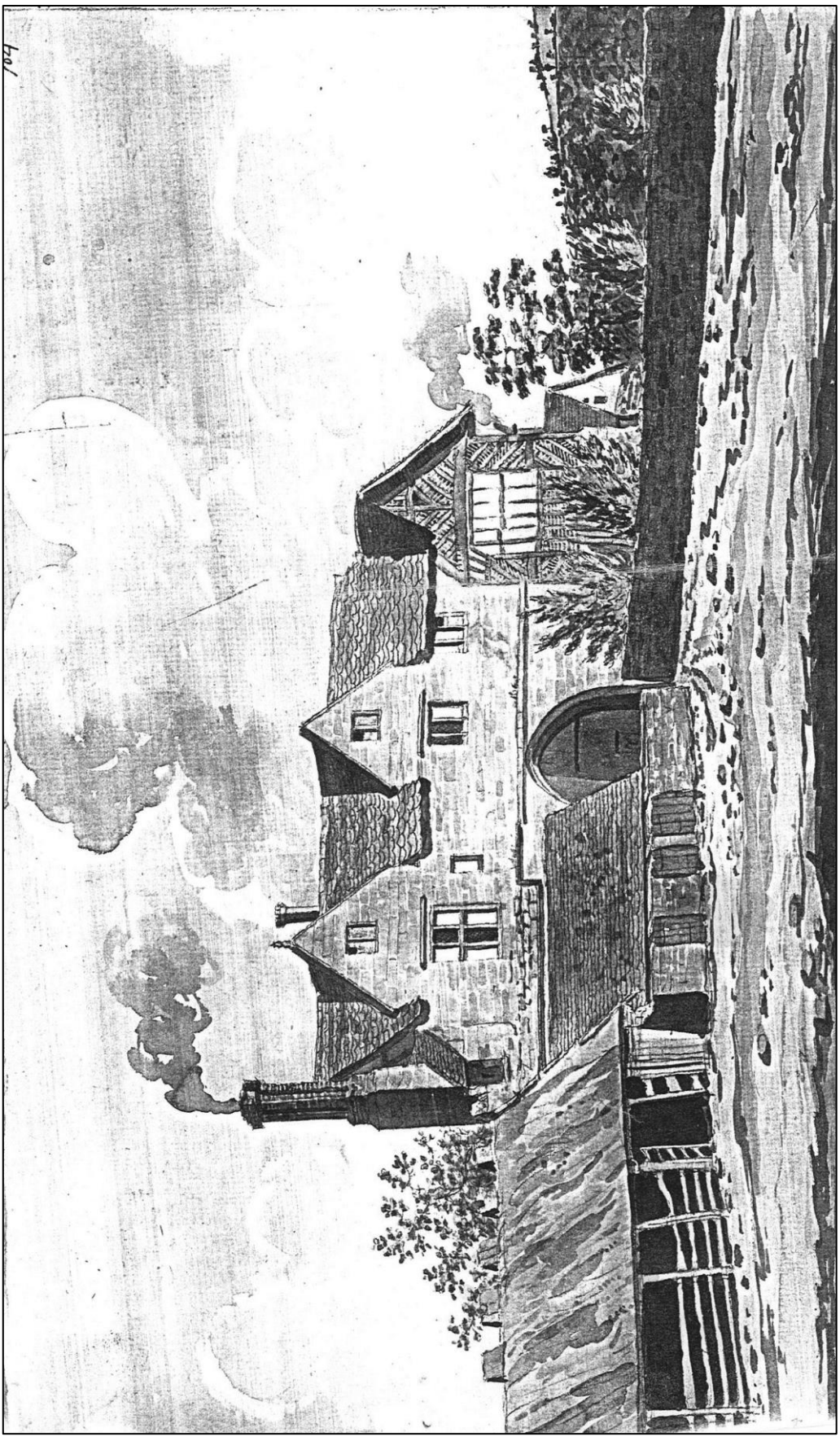
Antiquarian John Leland, who travelled the country in the 1530s and 1540s, described the setting of Langley Hall thus:

> *'Scarce a mile from Acton Burnell standeth Langley, seated very low and flat, in a parke full of woods, the dwelling-place of the Lees, which may well challenge to be ranged among the families that are of better worth and greater antiquity in the tract.'*

Our knowledge of Langley Hall is largely based on the only known 18th-century illustration – a water-colour painting by the Rev. Williams, dated 10th September 1789. Later illustrations of the building are believed to be derived from this one. The painting shows a long, straggling building of several phases. Richard Morriss provides a description as follows:

> *'The main portion of the building appears, essentially, to have consisted of a timber-framed, and probably open, hall with a large gabled roof aligned at right angles to the Gatehouse. At either end were cross-wings. That to the east broke forward to the north and appears to have been built of stone and to have consisted of a tall first floor over an undercroft. A large first floor window, square-headed and of four lights with mullion and transom, exists in the north wall, but appears to have replaced an earlier window with a two-centred head.'*

The painting shows a cross-wing at the opposite end of the hall, apparently of two storeys and timber-framed; it is just visible to the west of a projecting two-storey, timber-framed porch. The close studding of the ground floor framing of the porch, and the lozenge and diagonal design of its first floor, is similar to that of the gatehouse; the porch was presumably a much later addition to the medieval hall. All the chimneys of Langley Hall are shown to be very tall and of brick, and are similar to the pair of chimneys on top of the gatehouse's northern stack.



Langley Hall in 1789. Rev. Williams

The evidence of the painting suggests that at one stage, Langley Hall consisted of the typical medieval domestic arrangement of one large hall, flanked by cross-wings containing the solar above an undercroft at the 'high' end, with a service cross-wing containing the buttery and pantry at the 'low' end. The medieval hall would usually have a screens passage at the low end, dividing it from the service wing; the passage was accessed via two doorways in the side walls. The position of the timber-framed porch, probably of late 16th or early 17th-century date, could indicate the position of the screens passage. The polygonal structure in the extruded angle between hall and solar wing could have been the typical medieval oriel, containing a well-lit stair from the hall to the private quarters (the solar) of the lord and lady of the house on the first floor of the cross-wing. This arrangement would fit well with a late 13th- or early 14th-century date.

The excavation carried out by the Archaeology section of Shropshire County Council largely supports this interpretation. They also exposed the top of a round, stone-lined well of unknown date. On Rev. Williams' water-colour there is, immediately in front of the mansion, a small timber structure that looks like a modern dog-kennel, but could be a small structure covering the well-head.

The *Victoria County History* for Shropshire[1] described the hall as follows:

> *'Langley Hall…was an L-shaped house, partly of stone and partly timber-framed. In 1672, when it had 16 hearths, the house was still the residence of the lord of the manor, but it had been let to one of the tenants as a farm-house by 1717. It was still standing in 1846. The main building faced north and south and included a timber-framed hall with a porch on the north side. A stone-built wing was added at the east end, probably in the later 16th century. This had mullioned and transomed windows, and a stone bay-window stood in the angle between it and the hall. A timber-framed wing continued at a lower level to the west of the hall.'*

[1] A. T. Gaydon, Volume 8, 1968, VCH.

Kelly's Directory of 1863 states that the hall was tenanted by James Davies, a farmer; *Cassey's Directory* of 1871 mentions 'Langley Hall, an ancient mansion, now a farm house in the occupation of Mr. Hayward', also a farmer. Langley Hall had definitely been demolished by 1880 and probably before 1875.

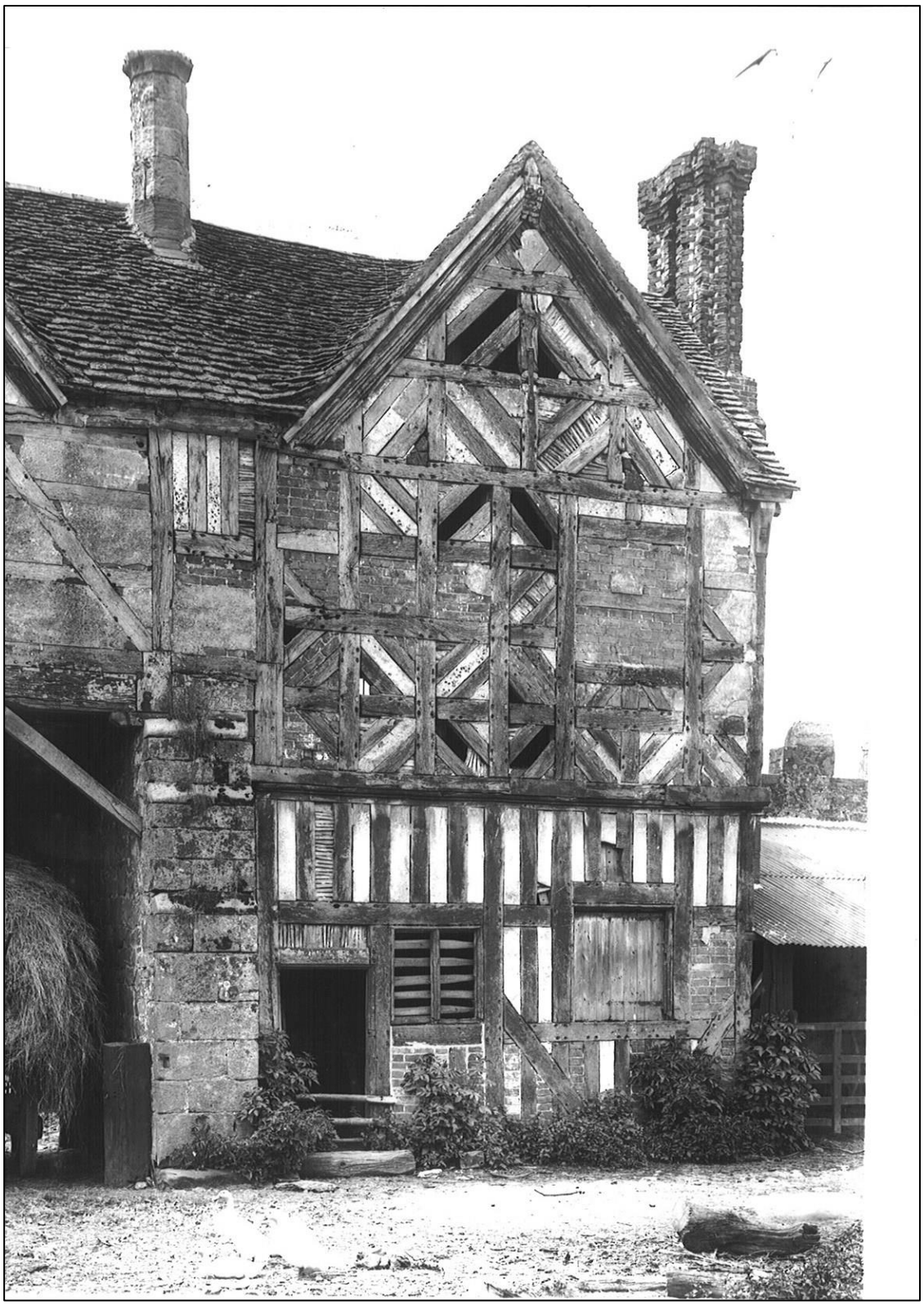
Langley Chapel

Richard Burnell is said to have obtained licence to erect a chapel at Langley before 1313. This probably stood on the site of the present chapel. *The Builder* for the 23rd August 1912 describes a visit:

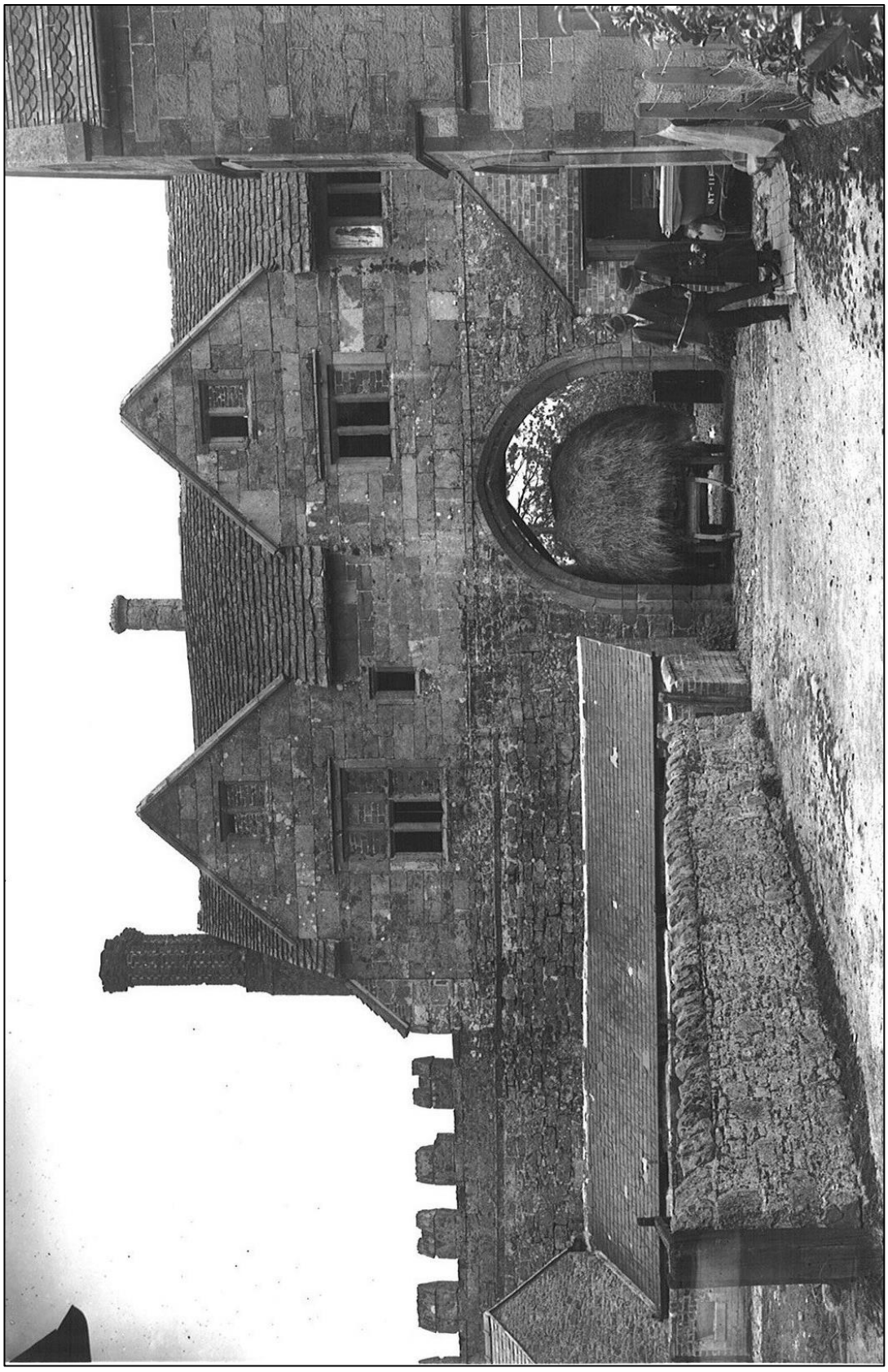
> *'Langley, the next place visited, provided in its desecrated chapel and ruinous gatehouse material for sketchers of which they were not slow to avail themselves. The chapel, about 48 ft. by 16 ft. 9 in., is extremely interesting as an example almost completely of the Jacobean period, preserving the original seating intact. It is a simple little building, rather uninteresting externally, but its internal arrangements, and particularly the seating of the east end, are very noteworthy. The altar table stands detached, and benches with book rests surround it, lining the east and north walls, and formerly (it is stated) the south also within the chancel, which is marked by a step. Immediately west of the step on the north side is the covered squire's pew, next to which on both sides of the central passageway are closed pews for the gentry, with rude benches westward for the common folk. The chancel is covered by a moulded trussed rafter roof, and the nave by a roof with arched principals, of which the most easterly is dated 1601. It may be hoped that so unusual a building will not be suffered to fall into complete decay, as it now threatens to do.'*

The living was normally served by the Rectors of Acton Burnell, but the Rector in 1799 disclaimed responsibility for Langley, saying that it was 'no chapel of his.' The chapel has no known dedication. A visitor in 1823 described it as 'in a most filthy state, covered with the ordure of owls, who seem to have taken possession of it'. Augustus Hare wrote in 1898 of the 'desolate old chapel on the hill'[2]. It was repaired by the DoE in 1978.

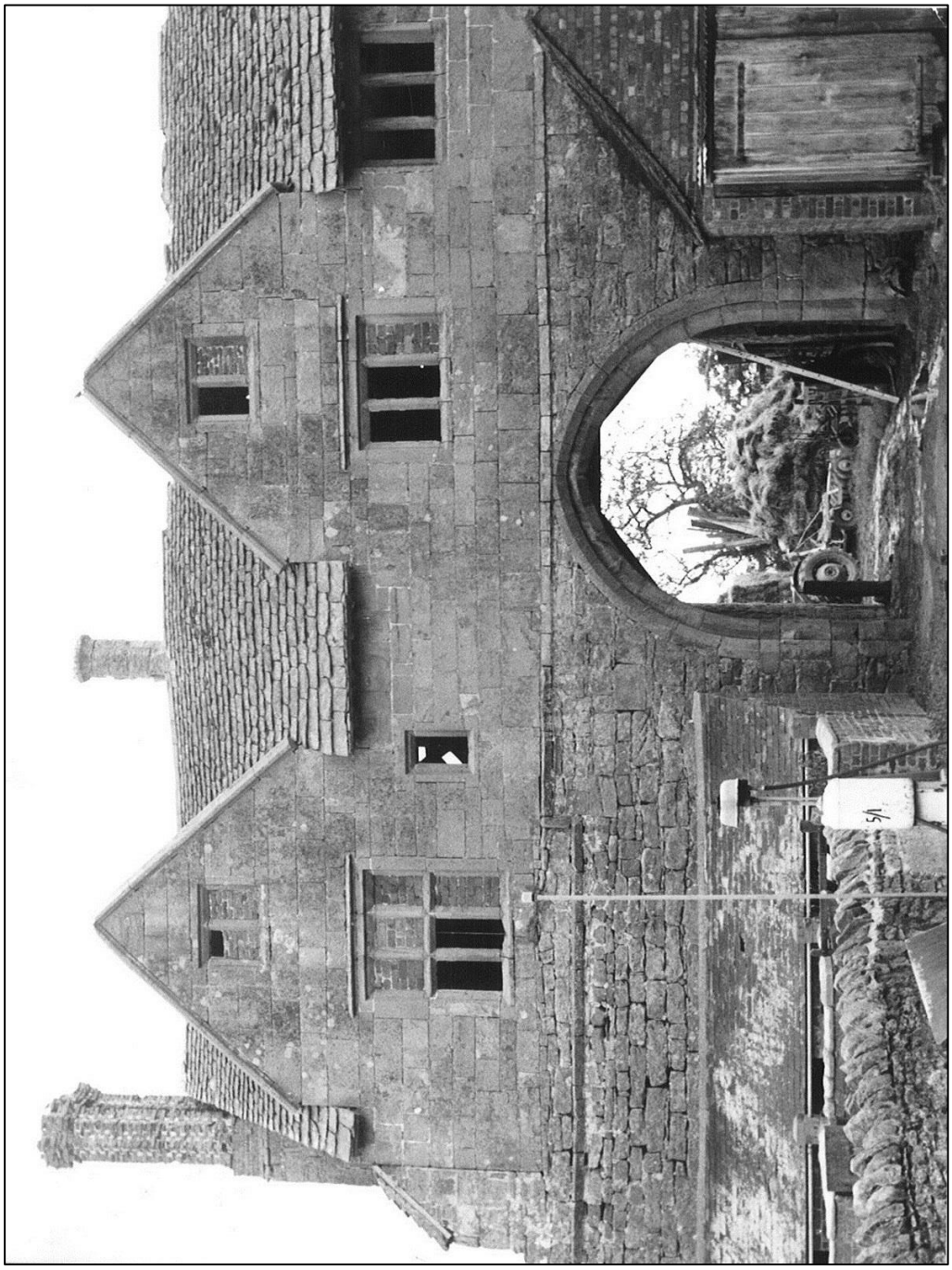
[2] Augustus J. C. Hare, *Shropshire*, 1898.



The east front in the 1920s (Conway Library)



The west front in the 1920s (Conway Library)



The west front in 1967

The east front before repair

The repair of Langley Gatehouse

Introduction

The repair of Langley Gatehouse is the result of a successful collaboration between English Heritage and the Landmark Trust. In 1978, when it was resolved to take no more buildings into guardianship, the Department of the Envrionment's negotiations at Langley were abandoned. In 1983, English Heritage was created as a section specifically charged with care of historic buildings section within the DoE. It still felt an obligation to help secure Langley's future. The difficulty was, how to achieve it?[3]

Landmark had known about Langley's plight for some years, but was deterred from proceeding both by the cost of the repairs and by the setting of the building, then in the middle of a farmyard. By acting together, not only were the problems facing both bodies in terms of cost and future care made instantly soluble, but the impetus was provided to negotiate with the agents of the Langley estate and with Mr. Faulkner of Langley Farm.

English Heritage was prepared to fund the repair of the gatehouse, while Landmark would lease the building from the estate, pay to make it habitable and oversee the work. It would also provide a use for the building, and be responsible for future upkeep. By agreeing to cover the expense of moving the farm buildings to another site, Landmark also resolved the final problem of the setting. The run up to starting on site was not all plain sailing, however. Two rather different

[3] In the early days of both English Heritage and the Landmark Trust as steered by John Smith, there was quite often tension between the two bodies over repair philosophy. Charlotte Haslam's text in this section rather reflects this, and has been left intact. Today, such debates between Landmark and Historic England (as this arm of English Heritage has become known in 2015) still sometimes occur, but are now perhaps engaged upon by both parties with genuine relish for the necessary intellectual and professional debate. Historic conservation itself as a discipline has matured in the intervening years – as, perhaps, have both bodies. – CS, 2015

approaches to repair had to be blended, with compromises on both sides, and much discussion both of detail and wider philosophy.

This process was in fact to be of great benefit, because as a result, every aspect of the work was fully debated and settled before starting on site. Once work did start, it went smoothly, with no surprises or hitches, except once at a late stage over the one matter on which a decision had been postponed. This smooth progress owed much to the skill and high standards of the builders, Treasure and Son of Ludlow, and their foreman, Mervyn Higgins, who contributed his own experience and ingenuity to site meetings. That the whole project got off the ground at all owed much to the officers of English Heritage and Landmark, and also to the tenacity of the architect, Andrew Thomas, and of the quantity surveyor, Adrian Stenning of Bare Leaning and Bare, who tirelessly revised figures to make them acceptable to everybody.

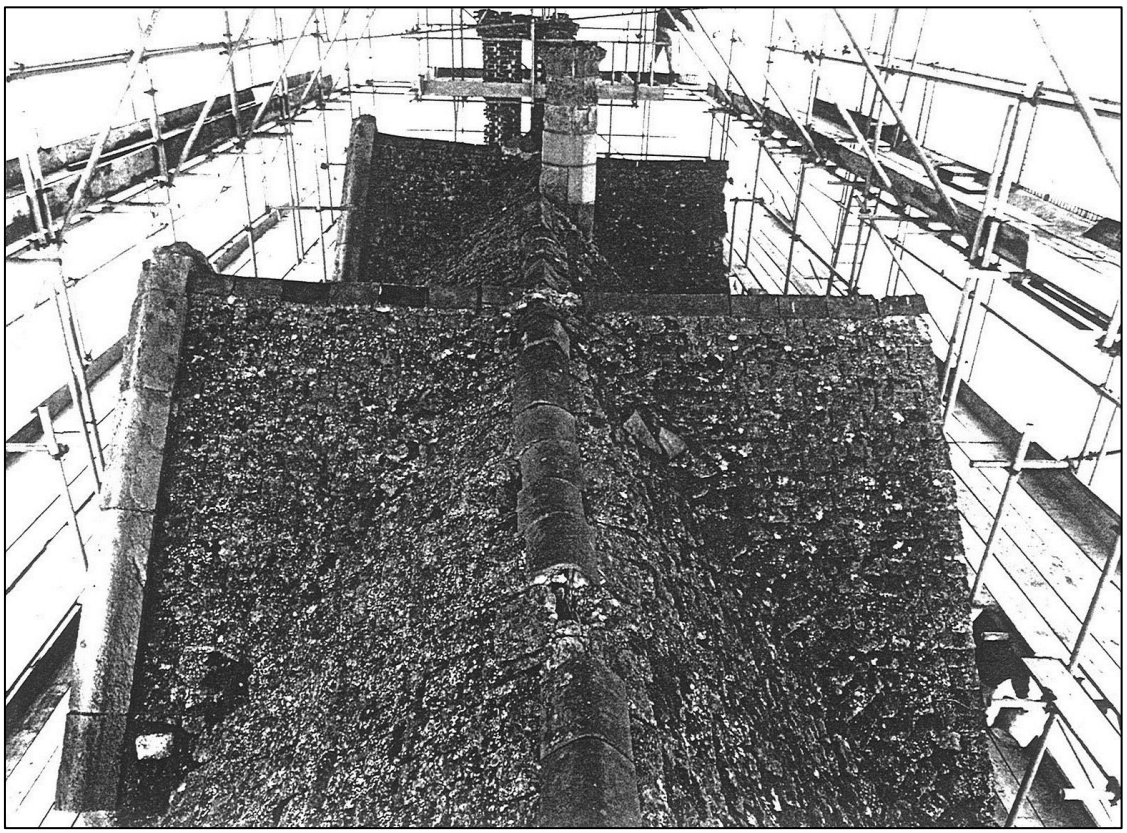
Settling all these matters was a long process. Eventually, agreement was reached on all fronts, and an idea that arose from a chance meeting in 1986 between Jane Sharman of English Heritage and Robin Evans of Landmark became reality when work started on site on 27 January 1992.

Philosophy

The main areas of debate lay in balancing the desire of English Heritage to maintain the building as an ancient monument, with all the accidents of time fully visible, with the need of the Landmark Trust to make it habitable, and moreover a pleasant place to be. Both bodies are in favour of conservative repair, avoiding excessive renewal, but Landmark was perhaps more willing to accept the necessity of a little bit of restoration at the same time, and even taking history on a stage by introducing some changes.

For example, when designing the casements for the western windows in the attic bedrooms, which had had fixed glazing in their original form, Landmark proposed to make one casement in each an opening one, for fresh air, especially in the north bedroom which had no other window. English Heritage accepted this change, as well as Landmark's proposal for two new windows in the south end, giving a view over the valley from the kitchen and bathroom.

View from the east before repair



The roof before repair

It seemed that there never had been windows there originally, but the advantages of the alteration were obvious.

English Heritage was less inclined to accept another new window, and the framing around it. This was in fact a restoration of one that was known to have existed over the gate arch, looking east towards the Wrekin. English Heritage objection was based on the fact that this part of the frame had been rebuilt in the 18th century, and should therefore be left as found. However, the sitting room would have been very gloomy with only one window looking west, so they finally agreed to it, with the proviso that work in this area be excluded from the grant-eligible repairs.

Inside the gate passage is a memorial to the championship of the conservative approach by David Heath, the architect representing English Heritage at Langley. Here, battens nailed on (probably by the DoE in 1978) to hold up the plaster ceiling over the passage have been lovingly preserved.

Other controversial philosophical questions included the extent to which later brick infill should be replaced by lath and plaster; the use of green or dried oak in the repair of the frame; and whether the east front should eventually be limewashed as a whole or only in part. The results of raising, debating and finding acceptable solutions to all these questions are now for you, who have the pleasure of staying in the completed work, to judge.

Positioning the re-laid Harnage stone slates for a roof valley

Roof and walls

The scaffolding which the DoE had put up around the gatehouse was itself something of an ancient monument by 1992, and highly unsafe. The first job therefore was to dismantle this and replace it with something more substantial. A photographer was standing by during this process, poised to record the building unencumbered. Fortunately the sun came out for just long enough to capture this transitory state of romantic and fragile decay.

Props had already been inserted to hold up the plaster ceiling in the parlour. Further props were included in the scaffolding to hold up the northern end where it had been weakened by the removal of part of the ground floor front wall. This was made all the more urgent by the discovery that the building's north east corner was supported on a wine bottle inserted at some distant date beneath the worn out foot of the corner post.

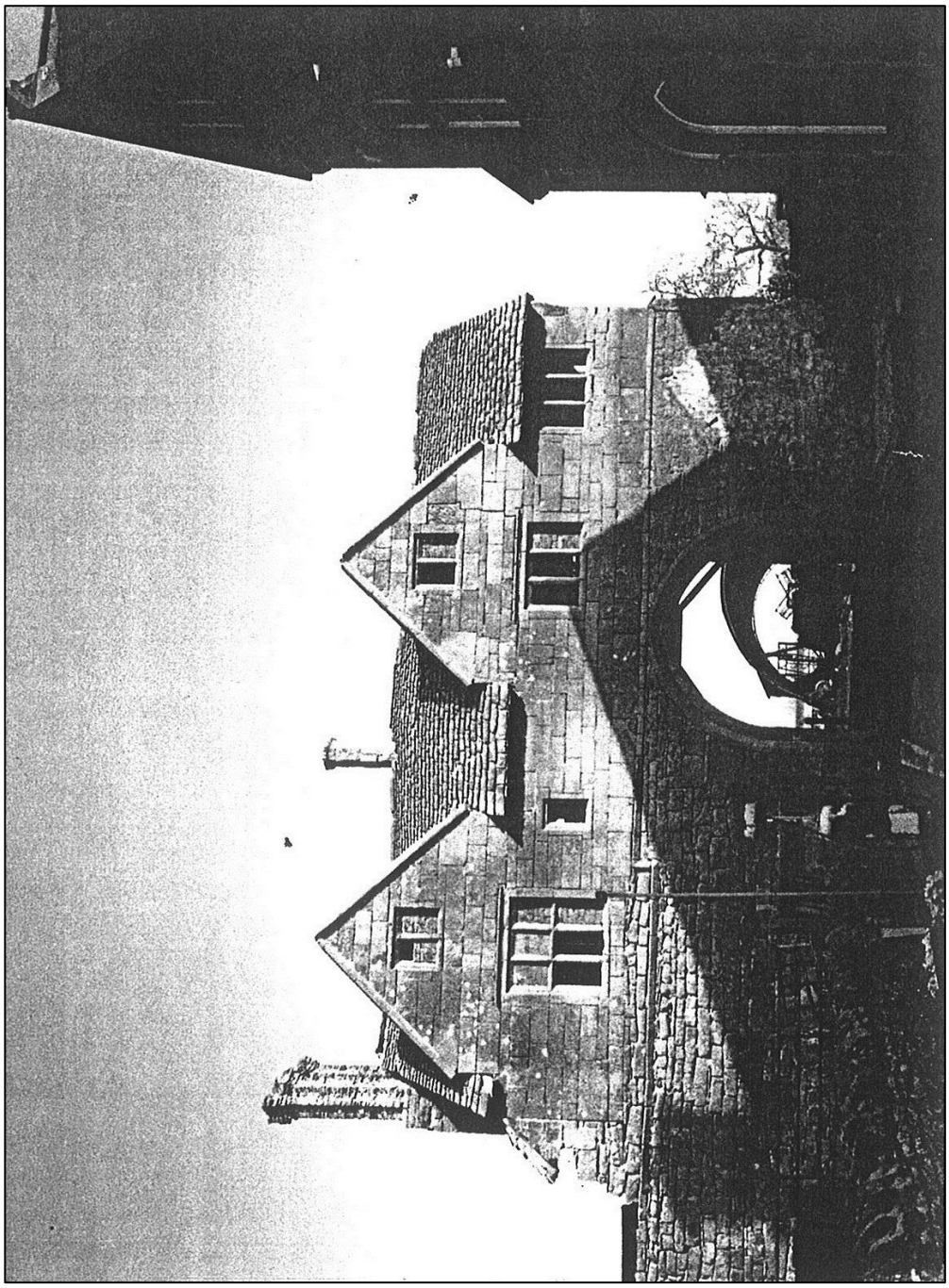
The load on the walls was greatly reduced when the stone slates were stripped off the roof. These were then stacked on a specially-provided tier of scaffolding to avoid the toil of taking them down to ground level and then bringing them back up again later. Before this, Ron Shoesmith of Hereford Archaeology Unit made an exciting discovery of three original Jacobean ridge tiles, survivors of many re-roofings. These tiles, which showed signs of having once had decorative crests, provided a model for the new ones that would be needed.

The roof covering is one of the best features of Langley. The stone slates are from Harnage, near Shrewsbury, and are made of sandstone with a high level of fossil material; whole shells were clearly visible close to. The quarry closed long ago, and one of the worries had been how to replace those that were missing or broken. By great good fortune, Treasures had some in their yard, carefully salvaged from another site, and they offered these to us.

Relaying the Harnage stone slates in carefully gradated diminishing courses

Once the slates had been stripped, the roof structure itself was patched and repaired. Softwood boarding was then laid on top of this, and the slates re-fixed onto new battens with new pegs. Some were bedded in mortar to prevent water seeping in. The slates were graded by size, with the largest ones for the lower courses, and the smaller ones higher up, in so-called diminishing courses. Many of them still have a good growth of moss and lichen on them.

Around the dormer gables and the chimneys, carefully-shaped lead was laid to act as an invisible gutter. The slates then formed 'swept' valleys over this, curving around the angle without a break. There were to be no eaves gutters, the deep eaves shedding water away from the walls beneath.



The west front before repair

The west front

Reroofing did not take place until the autumn. Meanwhile much activity had been going on below. On the west, or stone, front, repairs began with some drama. Following the cautious removal of one facing stone where the wall was bulging badly to the north of the gate arch, there was a deluge of rubble, leaving a hole the size of a man. Luckily no one was hurt. Happily, the two skins of which the wall was constructed had already been temporarily tied together, the danger of collapse having been suspected. The wall was rebuilt with new rubble bedded in lime mortar, and additional steel ties for strength. No attempt has been made to straighten up its profile.

South of the arch was a garage which was taken down. This revealed another, lesser bulge, but this proved less volatile and the repair here was straightforward. Following these repairs, the west wall was repointed, using a lime mortar mix that matched the old mortar in the wall. A similar mortar was used in the side walls of the gate passage, where the joints had all been raked out in 1978. When it came to the upper parts of the wall, and the more finely-dressed masonry of the Jacobean gatehouse, a mix containing brick dust was used, again matching old mortar that survived at this level. (Small brick chippings have a strengthening effect on the mortar, in fact.)
Nowhere in the building has cement been used in mortars or plaster. The use of traditional mixes of lime and sand not only works better with the old materials in a visual sense, but in practical ways too. Lime has the effect of drawing damp out of a wall, so that any water that gets in quickly evaporates, rather than being trapped there by impermeable cement to cause problems in years to come.

The use of lime, and good drainage around the building, also made damp proof courses unnecessary. Along the foot of the west wall, French drains – gravel-filled trenches containing perforated pipes – were laid, to allow water to run away quickly.

Apart from repointing, the upper part of the building on this side needed no repair, the stonework being in good condition. Some of the windows had been blocked up in brick, probably in the 18th century, and this, for obvious reasons, was removed. New casements were then fitted; one window mullion needed some repair on its inner face.

The great oak doors that complete the appearance of the building from the west side are completely new. Only one hinge pin is old; the rest of the ironwork is copied from the Rev. Williams's sketch.

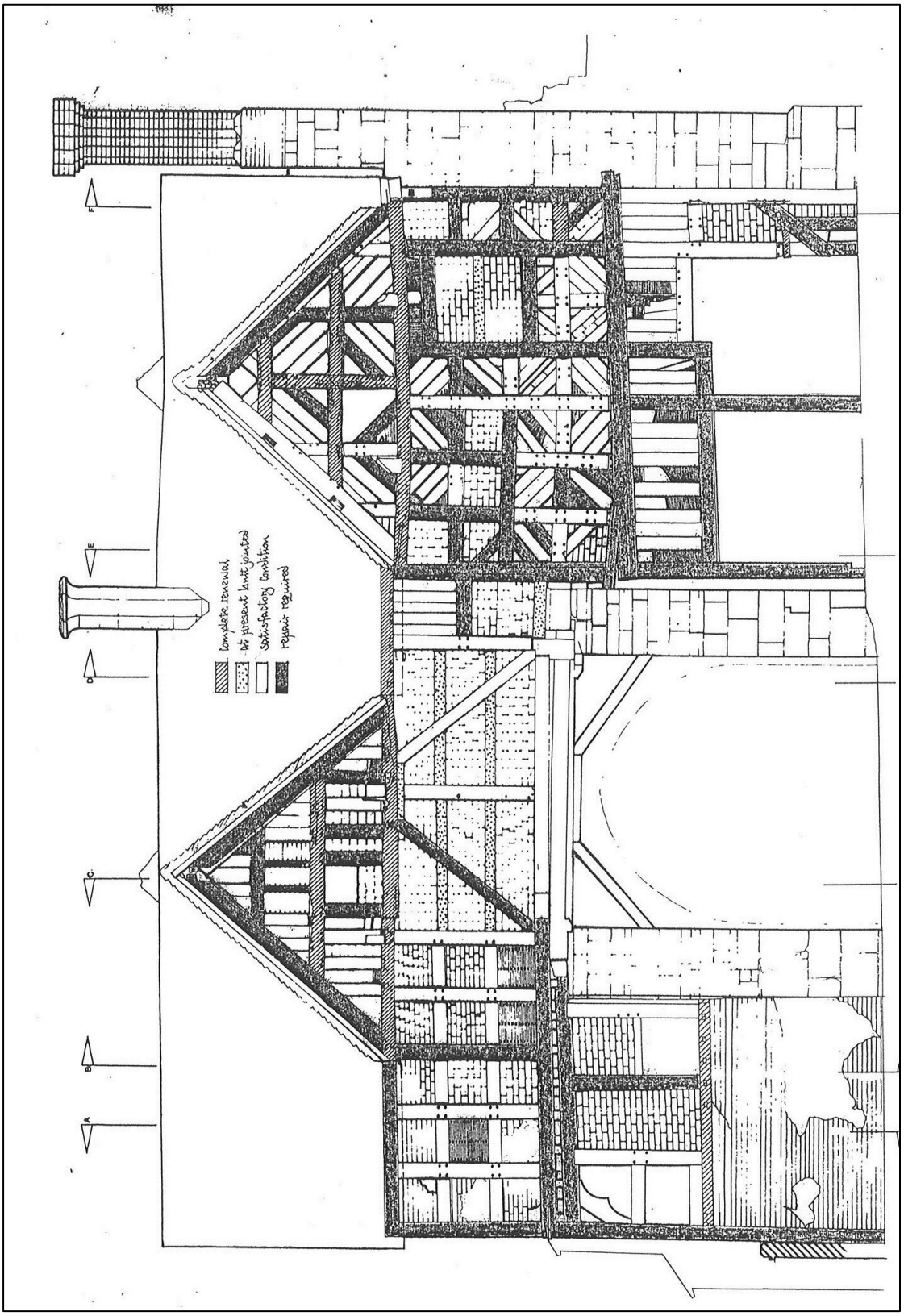
The timber frame

The repair of the east side, while less eventful, also had its tense moments. The plan was for the whole structure to function properly again, as it was designed to do, instead of using lots of metal ties to support a decaying frame. But before this could happen, the sagging structure had to be brought back to its true level: only then would each post and rail and brace work together, and resume their proper job of mutual support.

To describe this is one thing; to achieve it another. Jacking up a solid cobweb of timber is no easy matter. In the event, four jacks were distributed along the east front under the main beams. The process took a whole day, the jacks lifting inch by inch with pauses in between to allow the timbers to accustom themselves to the change. Altogether, the frame had sunk by around 10 inches, and was brought up again by 8 inches. Mervyn, of course, remained calm throughout.

The lifting operation complete, work could start on repair. The detail of this had been meticulously worked out. Every timber was numbered, to match a drawing on which the remedy for each had been detailed. Some needed new ends, others a piece in the middle. As much of the frame as possible was repaired in situ, but some sections had to be dismantled first. Seasoned oak was used for small repairs, but where a major timber was to be renewed, green oak was used, as it would have been in the original construction.

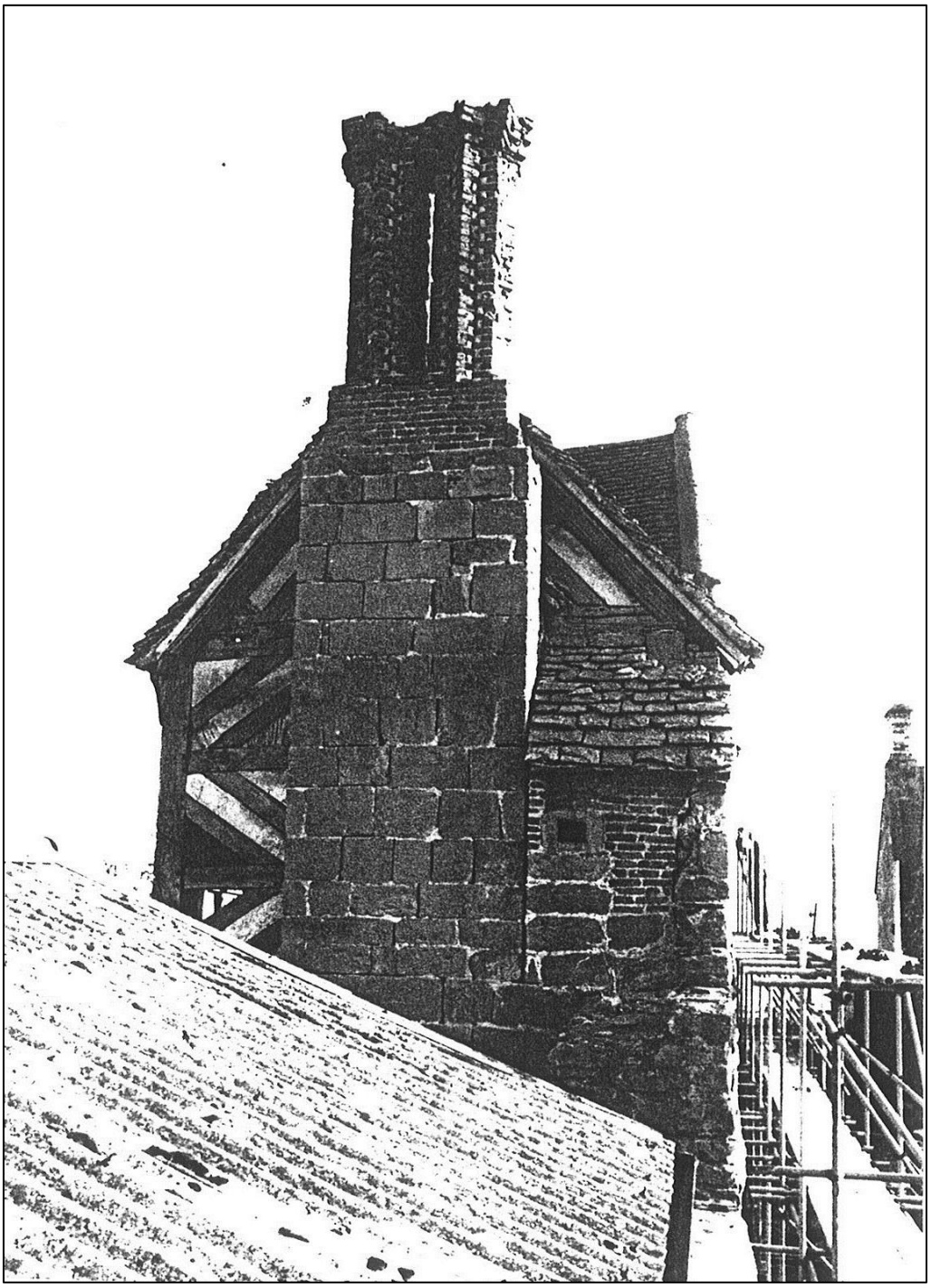
All the timbers are held together by mortice and tenon joints, a tongue (or tenon) on one timber fitting into a mortice slot in the next. The tenon is then held tightly in place by one or two pegs. These pegs were traditionally left proud, and in replacing them, this practice was followed.



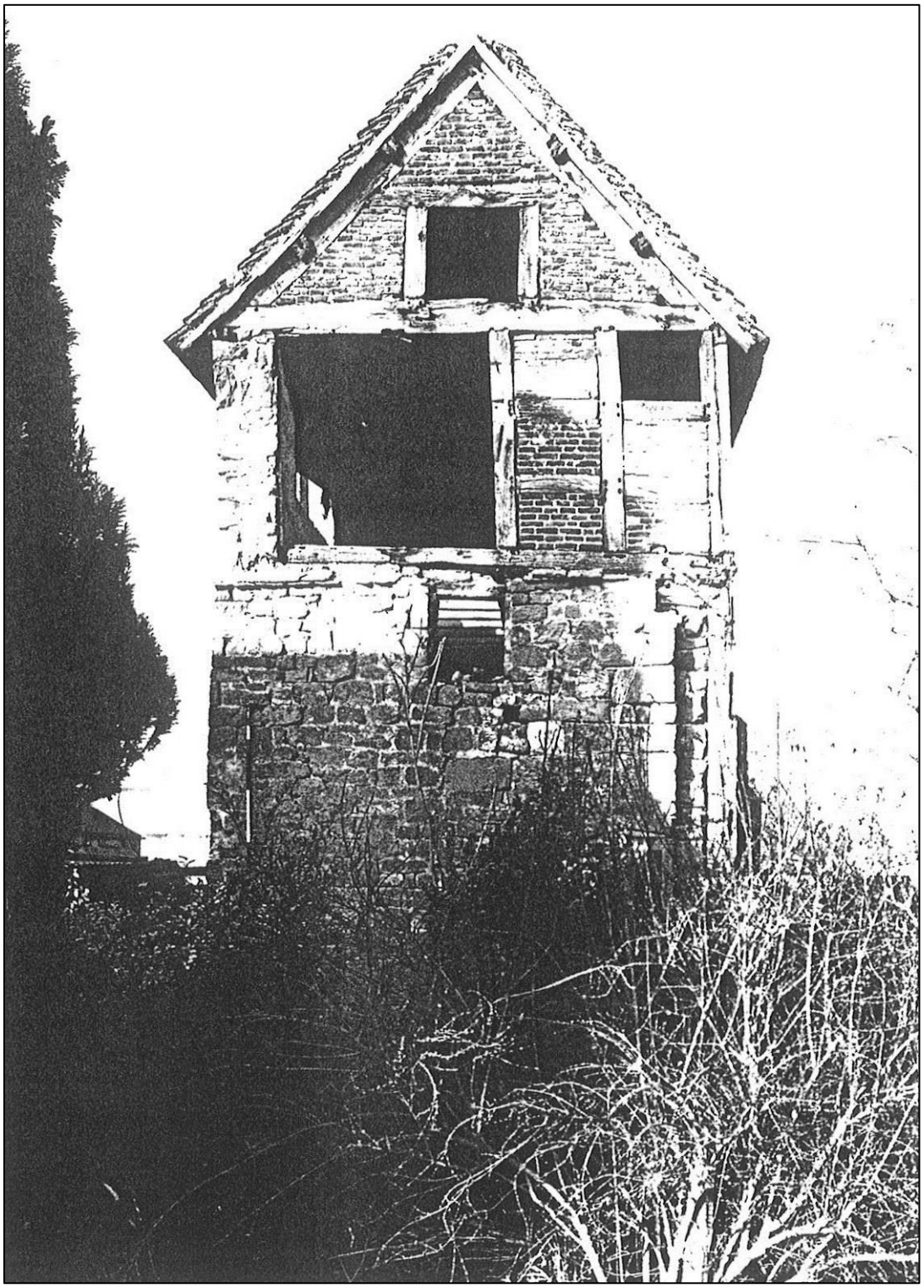
A survey of the condition of the timbers

The east front before repair

The condition of the north east gable



The north elevation



The south elevation

Peg holes and mortice slots provide useful evidence for missing timbers. Where a brace or stud that served a useful purpose was missing, it was replaced. Included in this category were two upright studs in square panels either side of the northern gable. It had been assumed that these were diagonal braces like the others around it, but Richard Morriss proved otherwise. They do in fact give more strength if upright, and this is how they were put back.

There is one exception to the rule of functional repair. South of the gate arch is the remains of a medieval structure. One corner post of this survives. Its foot has rotted away completely, so it is useless, but it has been kept as evidence of something more complicated having happened at this end. Similarly, on the brick wall between it and the arch there is an area of plaster which was once inside a structure running east from the gatehouse. This has been consolidated and left for the archaeologically-minded.

In the two areas where the timber framing has been entirely renewed – over the gate arch and on the north side of it, around the main door – archaeological and photographic evidence has been followed exactly. Importantly, you still step inside over the original threshold.

When first built, all the panels of the timber frame were filled with lath, made up of split, interwoven wooden branches, and then plastered, or daubed. The grooves into which the lath fitted survive. However, over the years, many of the lath and plaster panels had been replaced by brick. English Heritage was keen that, wherever possible, this brick should be kept. A complicated method evolved whereby brick panels removed to repair the frame around them were replaced with new lath and plaster only if, in the process, a missing timber brace had been reinstated. If no new timber was inserted, the brick in most cases went back as before, as in the case of the two little blocked windows over the main door.

Repairs to the timber-frame

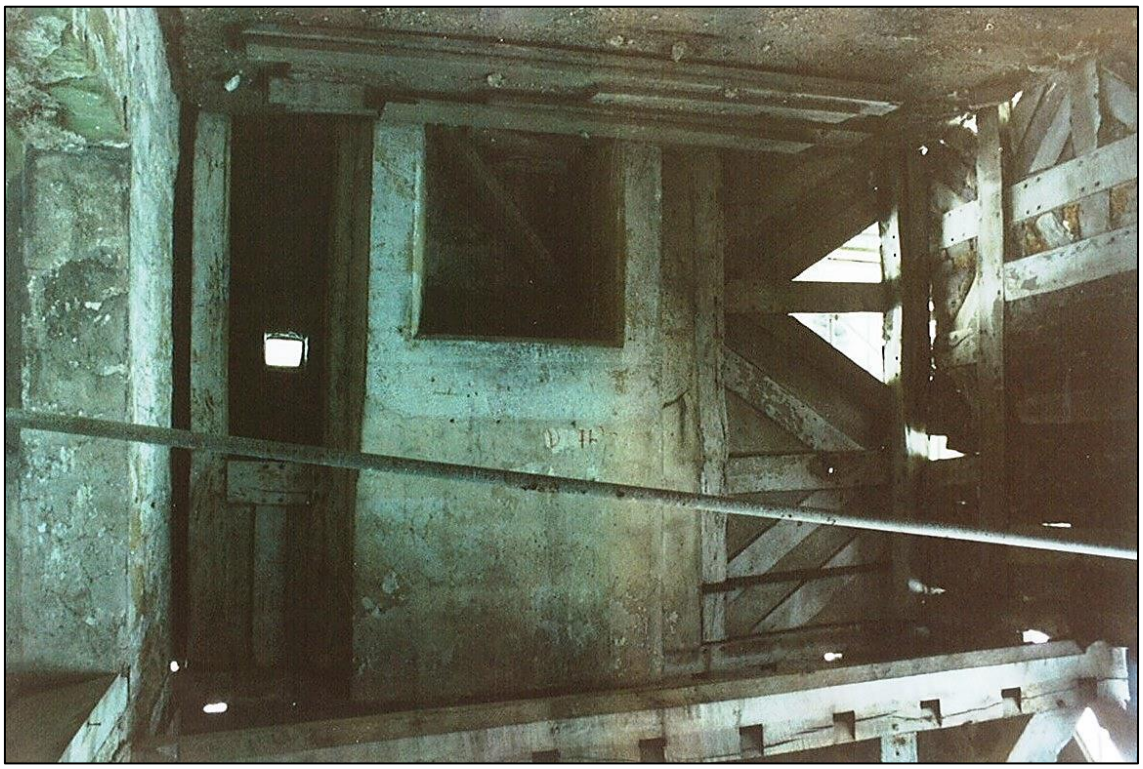
Where there was no infill left at all, the panels have been filled with lath and plaster. Similarly, where old lath and plaster survived, as it did on the north end of the building, it has not been disturbed. In some places, brick panels too have been left in place, particularly those at the southern end of the east front.

The mortar for the brick panels, and the plaster applied to the lath, like that on the upper part of the stone front, contain brick chippings. The plaster itself is a soft gold colour.

The outstanding quality of the work, and the beauty of the finished result, caused the one moment of indecision. There was a strong temptation to leave it all visible, rather than to limewash it, as the original builders would certainly have done. After some agonised discussions, sense prevailed. The plaster needed limewash to fill hair cracks and to protect it from the weather. If left unpainted, too, the inevitable tannin staining from the new oak would make indelible marks which would have to be limewashed over anyway. So the plaster panels were limewashed, the gold colour reflecting that of the plaster beneath. At the urgent request of English Heritage, the brick panels were left plain, evidence of the building's chequered past.

Before the scaffolding came down, the brick chimney was repointed and its top rebuilt. The stone central chimney had been repaired by the DoE in 1978, however, and was left alone. The garderobe on the north-west corner was repointed and its roof re-slated. The surviving length of curtain wall was similarly repaired; the gap left where it had once continued northwards was built up in brick, to distinguish it from the old work. The breeze-block wall of the farm building on the other side, beside the parking area, was simply given a coat of lime plaster and limewash.

The ground floor, north end.



The first floor, north end.

Inside

Before work started at Langley, the ground floor was a farm store, full of things that might be wanted one day. To reach the first floor, there was a ladder which led up through a hole in the floor above; this was the largest of several holes. The only access to the attic was from the scaffolding.

Fortunately, the evidence was all there to recreate, in new materials, the original arrangement of one ground floor room, a hall and stair. The floor was paved in second-hand York stone. The windows are in the original positions, and the only innovation is the fitting of wide boards between the main posts of the timber frame, to give some protection against the cold. The lintel over the door into the bathroom has been chamfered on its lower edges to make collisions a little less painful, experiments with those of the building team over 6ft having suggested that some sore heads were likely.

The new stair is of oak, and may or may not echo its predecessor. It was designed to rise up through the hole in the floor left by a late rearrangement of the joists in this area, following the removal of the first stair. Its detail is entirely up to Andrew Thomas, as is all the new joinery in the building, from doors (oak) to panelling (painted softwood), using mainly 17th-century models. In the design of window and door latches, too, Andrew has drawn on his esoteric knowledge of traditional ironwork on the Welsh borders.

Evidence survived for the main partition across the building on the first floor, as it did on the ground floor. Later, however, a new partition (subsequently vanished) was made just to its south, clearing the window. The present partition is a combination of the two, its construction following the first, with square panels and the door at its west end. Its position, however, is that of the second, putting the whole window in the bedroom.

The first floor, south end

The roof trusses

Both west and east windows were either totally or part-blocked with brick, and have been reinstated with new casements and glass. In this bedroom, as elsewhere, the spaces between the outer wall posts were filled with boards for insulation. The oak floor boards were patched and repaired, and a new oak skirting fitted. The garderobe was given a floor to match the rest of the room.

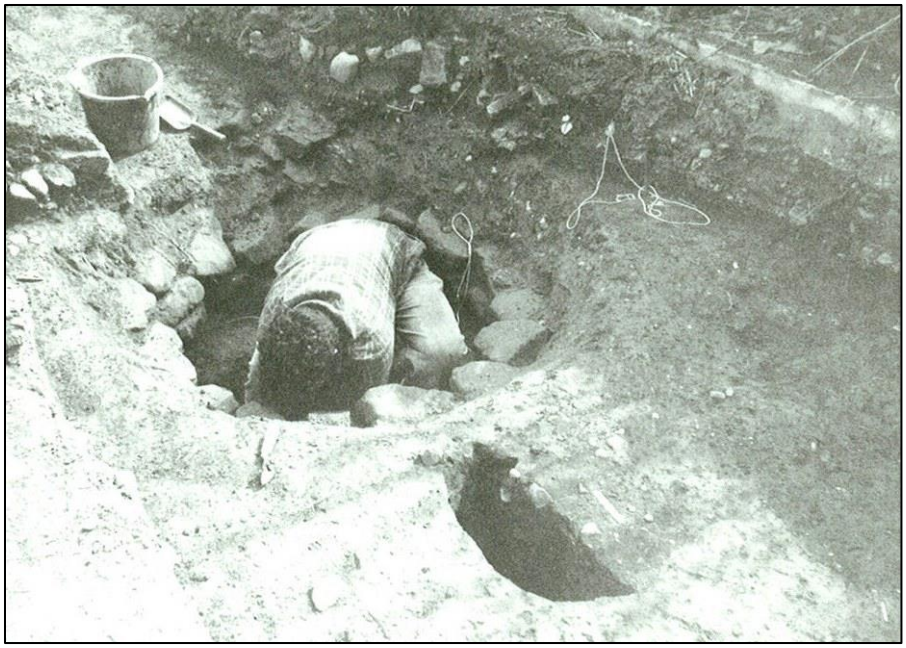
In the stairwell, the west window has been left with its bare timber lintel, a curious omission formerly shared by all the west windows. The stone wall of the chimney breast has not been plastered, just limewashed. The stair up to the attic follows marks left when the original stair was taken down.

The central room has resumed its character as the most richly-decorated in the building. Its east window was reinstated, its plaster ceiling and cornice repaired, and room is once again lined with paneling or wainscot. The floor boards, like those in the bedroom, were simply patched and repaired.

Next to this is the new kitchen. Now floored almost entirely with new oak boards, this room scarcely had a floor at all. Exploring Langley Gatehouse in its ruinous state was not for those with poor balance. Nor was there much, at that time, in the way of a south wall, which made access very convenient for the builders, until the new end frame was completed. The kitchen cupboards arranged themselves very easily along the east wall, leaving the south wall free for a new window.

The roomy attics gave space for two more bedrooms and a bathroom, which called for a second new south window. Here again, the floors were either absent or nearly so, and have been replaced in pine, as befitting their station in life. The chimney breasts and the stone walls of the west gables were never plastered, and they have not been now, simply limewashed. The west windows were originally sealed against the prevailing weather, but have now been given opening casements.

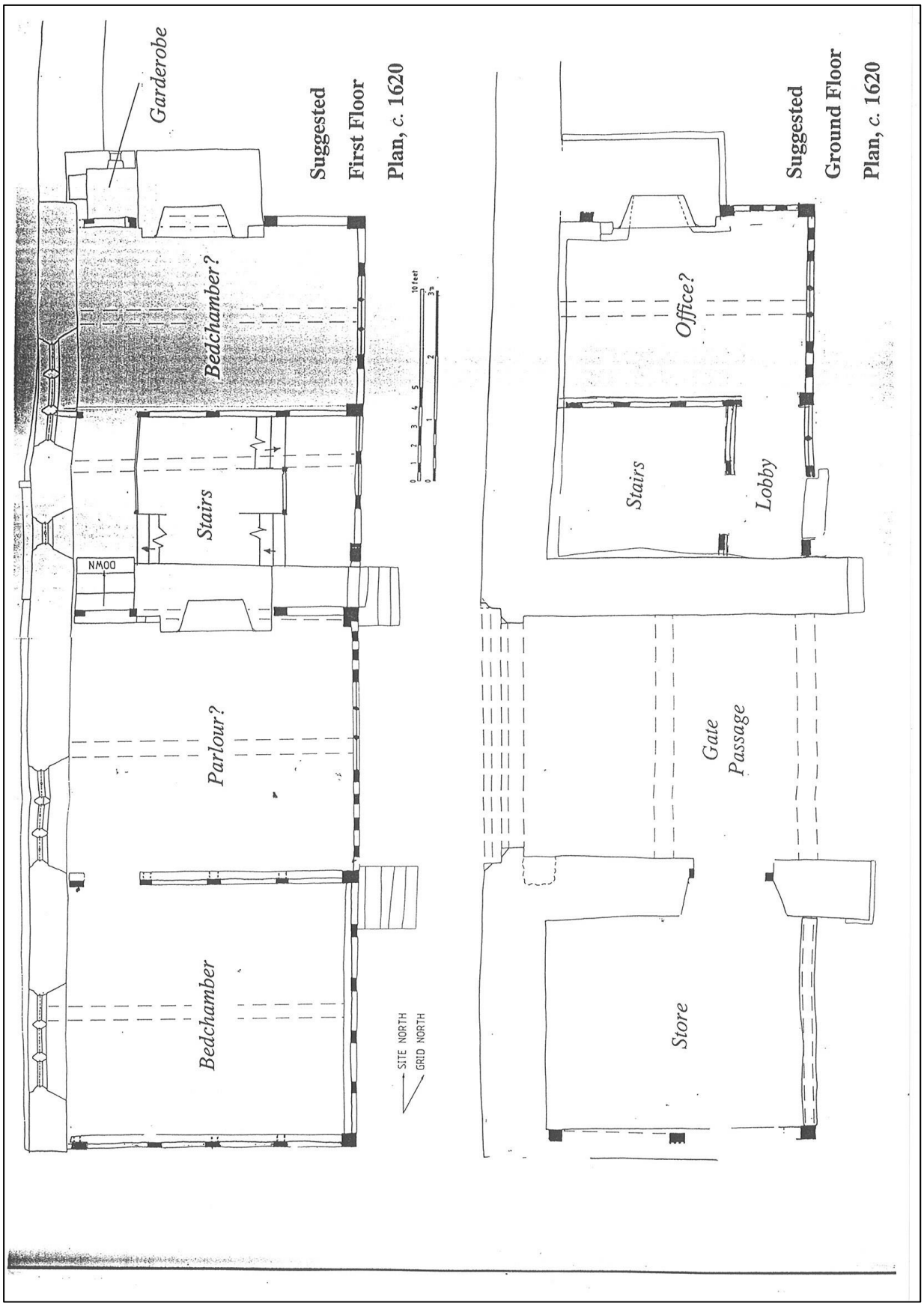
The one east-facing window has a fine view over the empty site of the former Langley Hall. Moving the barns from here was a delicate operation, to be fitted in with lambing and other events of the agricultural year. Once they had gone, it was possible to dig the trenches for the septic tank running out to the east, and revealing in the process both the old well, and part of the manor house. Final work involved landscaping and erecting the fence which marks the boundary of the Landmark's property.

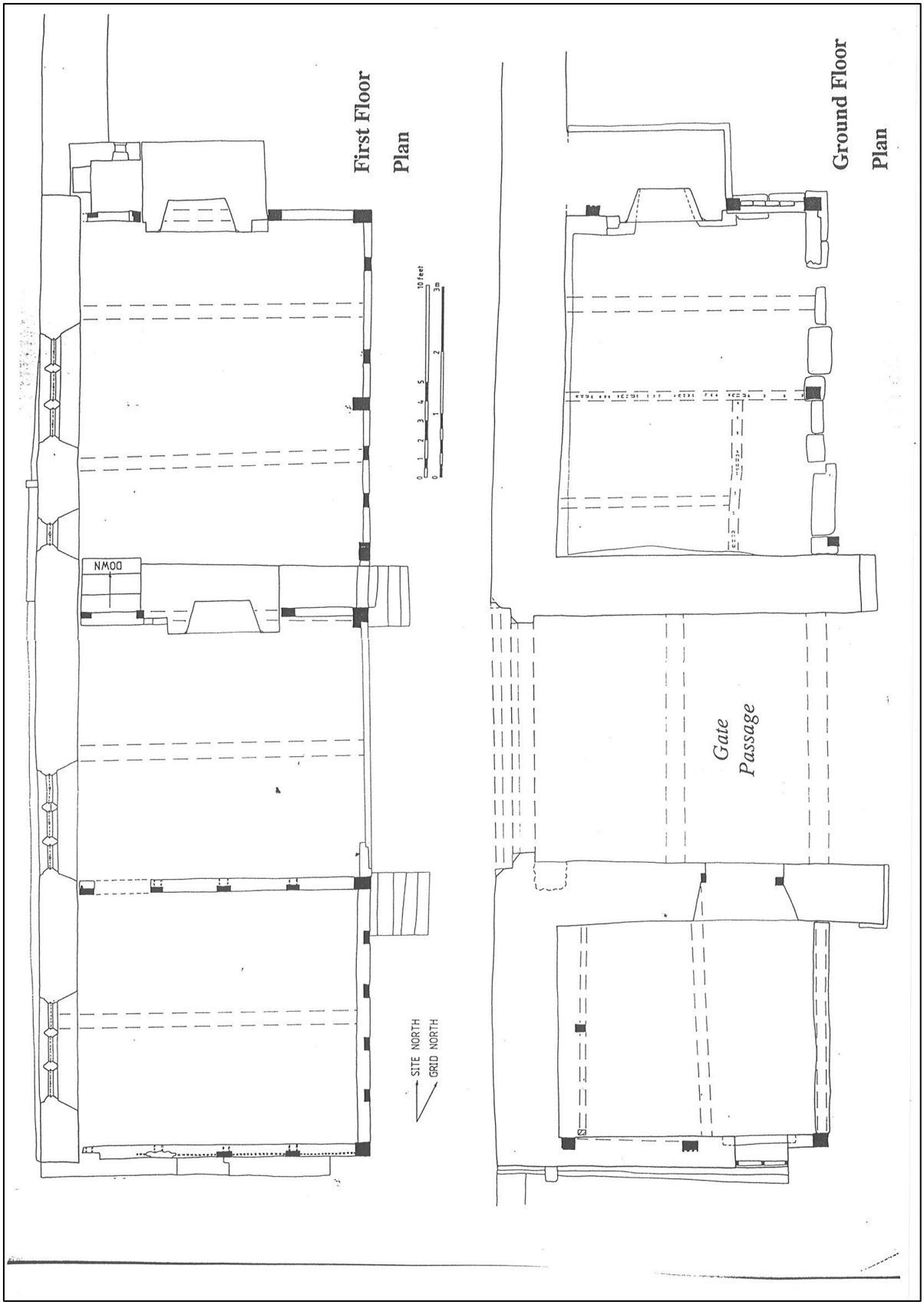


The medieval well found in the courtyard

Treasures left the site early in June 1993, ahead of programme and under budget, a remarkable achievement for all concerned. The gatehouse was furnished on 12th-14th July, just in time for a celebratory lunch with officers of English Heritage, Landmark Trustees and other members of the building team. This marked the end of a happy and successful co-operation; it is to be hoped this may happen again in future.

The repairs completed


Suggested
First Floor
Plan, c. 1620
Garderobe
Bedchamber?
Stairs
DOWN
Parlour?
Bedchamber
SITE NORTH
GRID NORTH
10 feet
Suggested
Ground Floor
Plan, c. 1620
Office?
Stairs
Lobby
Gate
Passage
Store


First Floor Plan
Ground Floor Plan
10 feet
3m
NMOO
DOWN
Gate Passage
SITE NORTH
GRID NORTH

S·P·A·B
NEWS
Vol 14 No 4 1993

A Degree of Compromise: The Repair of Langley Gatehouse

Back to School: Fort Brockhurst and The Countess of Huntingdon's Chapel

The Repair That Almost Foundered

Goals of culmulative historical accuracy and re-use often conflict, and were prominent in works to Langley Gatehouse, Shropshire, carried out for the Landmark Trust. Architect Andrew Thomas, a former SPAB Scholar, describes the intricate work that was carried out on the building and the differences of opinion that came to light.

The successful repair and conversion of any building by the Landmark Trust will always be a labour of love. It will require carefully considered decisions on both practical and aesthetic matters as the work proceeds combined with a clear vision of the desired end result.

It is in this context that many people were wondering if two organisations as different as the Landmark Trust and English Heritage could sufficiently reconcile their attitudes to conservation to enable them to work successfully together.

Langley is approximately one mile SSE of Acton Burnell in Shropshire. At the end of the 16th century it was a thriving vlllage but is now no more than two cottages, a farm and a chapel. The gatehouse is the only surviving part of Langley Hall, a large rambling building of mediaeval origin which was home to the Lees, a wealthy and important Shropshire family.

Archaeological and archival research suggests that the gatehouse was built in one phase, enveloping an earlier building on the south side of a gateway which pierces the mediaeval defensive wall. Dendrochronology has been applied to several key framing members indicating a tree felling date of 1608. This roughly ties in with Lee family history to suggest a construction period around 1610.

Lee family fortunes declined rapidly following their support for the Royalist cause during the civil war. The hall eventually became a tenanted farmhouse and following a decline in the population of Langley during the 18th and 19th centuries, it slipped into a state of dereliction and was demolished at some time between 1870 and 1880.

The survival of the gatehouse must have been due to its usefulness as a store and cart shelter. There is evidence to suggest that basic repairs were carried out from time to time up to the early part of this century but as the years slipped by it gradually decayed. The post-war removal of two large areas of timber framing to provide tractor access caused some 12 inches of subsidence in the east wall and gable. Much of this was later eliminated by jacking to reduce the slope in the upper floors.

In 1978 the Department of the Environment refurbished Langley Chapel and decided that the gatehouse should be repaired, taken into guardianship and conserved as 'a ruin'. Scaffolding was erected, the cylindrical stone chimney was patched and jointing was raked out prior to repointing.

Only a few weeks into the repair programme the work was halted following a DOE policy decision to discontinue the creation of new guardianship arrangements. The gatehouse was to stand abandoned, still girdled with scaffolding, for the next eight years.

The east elevation before work began

In 1986 English Heritage, in an attempt to save the building from further deterioration, approached the Landmark Trust with an offer of one hundred percent grant aid to cover the cost of repairs.The Landmark Trust were asked to meet the cost of conversion and furnishing so that the building could be used for holiday accommodation.

The Landmark Trust acceptance of their offer was followed by protracted negotiations with the tenant farmer and Estate to secure the removal of a collection of ramshackle sheds and barns on the east side of the gatehouse as part of a lease agreement.

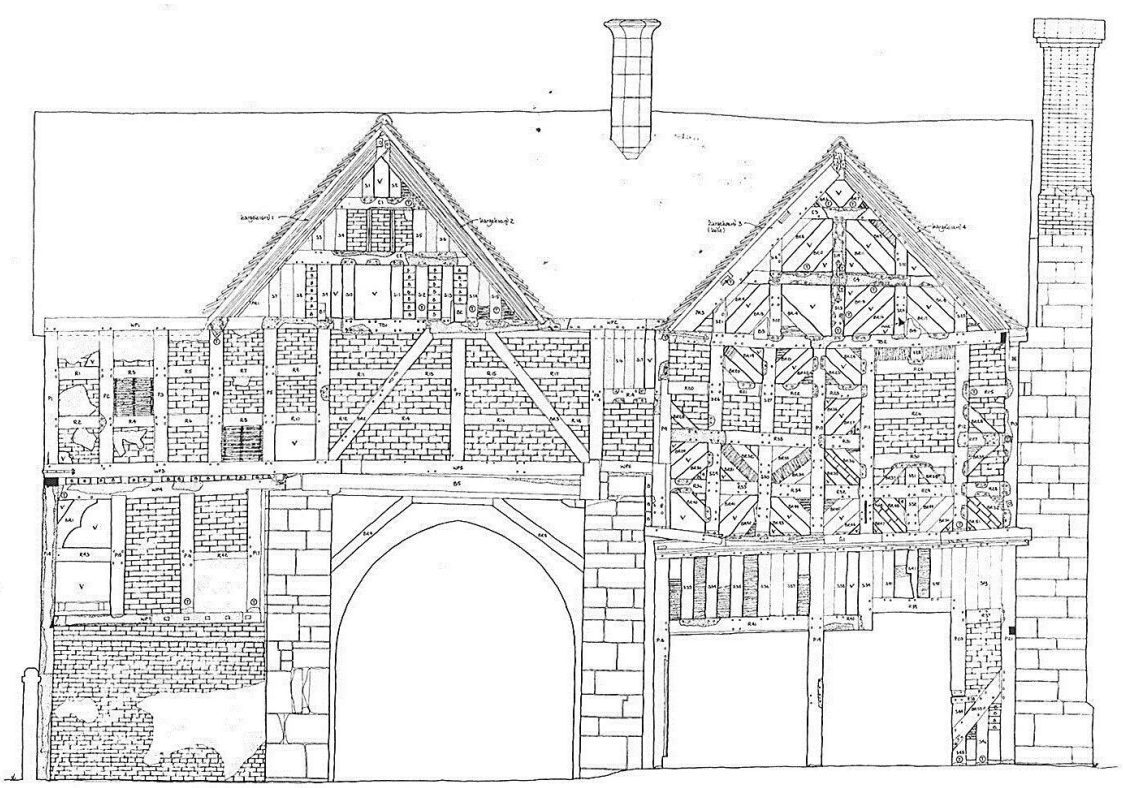
The Langley project was unusual in its high level of grant input by English Heritage. This necessitated the production of very comprehensive drawings and specification to enable agreement with English Heritage on all aspects of the proposed repair and conversion.

After much discussion and occasional robust debate over the extent and nature of the proposed scheme, agreement was achieved in all areas with one major exception, namely the reinstatement of a window and its surrounding framing over the inner gate arch. (There is physical evidence for a former window in this position.)

It is a well established principle in SPAB philosophy that the greatest effort must be expended in retaining the maximum amount of original fabric while achieving a workmanlike, honest and effective repair. An equally important tenet frowns upon the removal of additions or the reversal of alterations in order to restore a building to some historical form based upon conjecture.

English Heritage argued as follows: 'As you know we believe that the evolutionary character and appearance of the gatehouse constitute one of its special qualities. The reinstated 18th century framing over the inner gate arch is an integral part of the building's history and the wall contains brickwork contemporary with many of the infill panels which we have agreed should be retained elsewhere in the building. Since this is a conspicuous element in the facade and a feature of some considerable size, we consider that there must be a presumption for its retention. To adopt for whatever reason a different policy for this part of the building compared with the remainder would seriously prejudice the validity of the rigorous principles of conservation which we have now defined and agreed for the treatment of the brick panels. We do, of course, recognise the powerful arguments relating to the form of the interior and to the aspect of this building. Indeed, we do not deny that under different circumstances with a building of less sensitivity the approach you have suggested might well have been our preferred approach'.

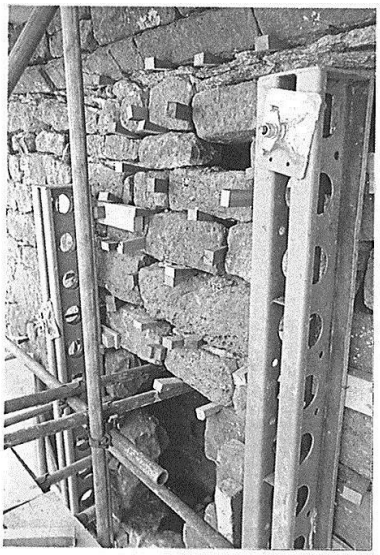
Our attitude to the proposed window may be illustrated by the following extract from a letter: 'The Trustees always carefully consider the suitability of a building for conversion to a



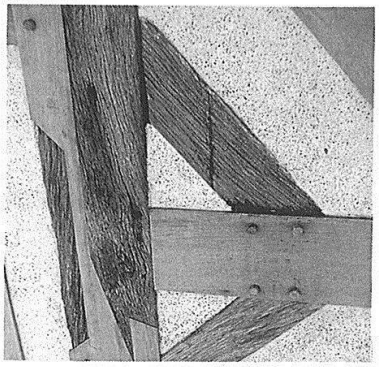
The east elevation after repairs were complete

Landmark. They have to satisfy themselves that, when all is done, they will be custodians of a building which, because of its special qualities, will always be valued by those who delight in spending their holidays in such places. It is these people who will fund the continuing care and maintenance of the buildings. It is in this context that I must emphasise the prime importance of the central room's aspect. The Landmark Trust and English Heritage have negotiated successfully with the landowner for the improvement of the land to the east of the gatehouse. It would be a disappointment to visitors if they could enjoy views across this land and towards the Wrekin from only one window on the principal floor. We are not in disagreement with your philosophical arguments in favour of retaining the east facade as an agglomeration of evolutionary change. We do, however, insist that the process of evolution should proceed naturally, as dictated by the necessity to change this building by a process of reversion from agricultural to domestic use. In every other respect we have prepared with you a scheme for the repair of the building which involves the minimum possible disturbance to historic fabric'.

The whole project would have foundered if English Heritage had not reluctantly agreed to the window. (The work was excluded from grant aid.) A delegation from SPAB visited Langley to comment on our application for Listed Building Consent. Some members of the delegation were unhappy about the alter-

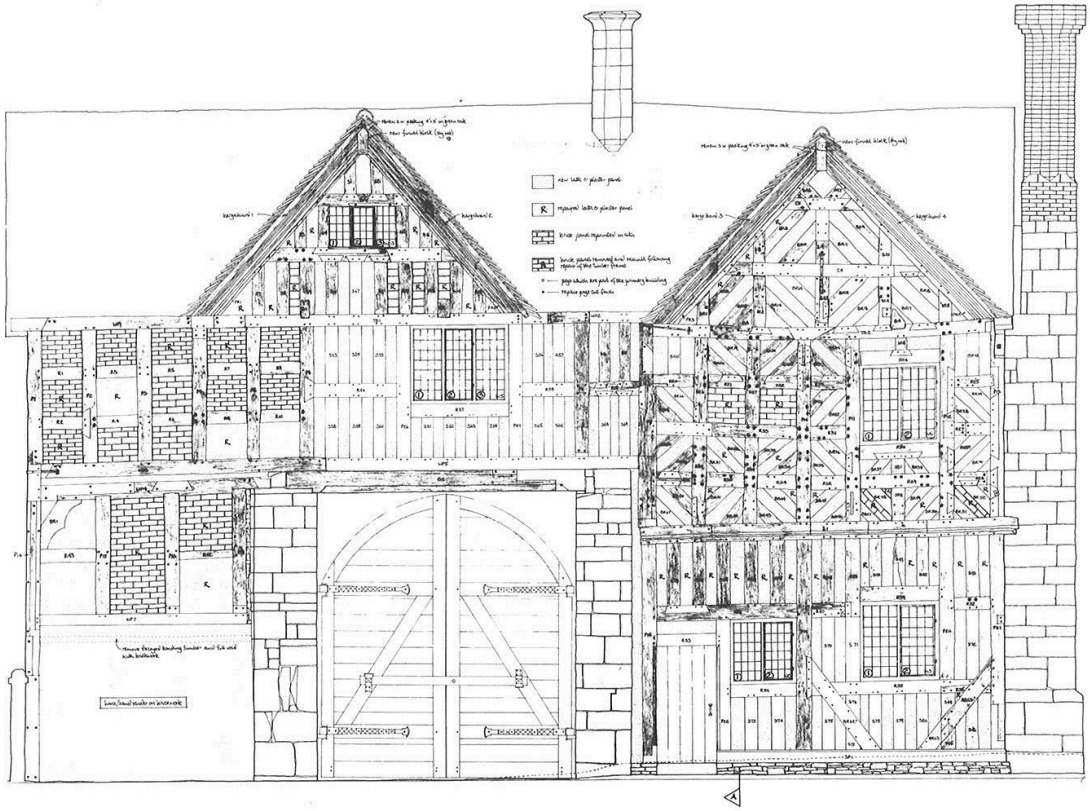


The mediaeval defensive wall was found to be heavily voided and bulging prominently in one area. The two leaves of walling were temporarily tied together and the joints propped open with hardwood wedges. This is a vital prerequisite to work on walls which exhibit symptoms of instability. The core was reinstated by bedding rubble and clay tile in lime mortar incorporating stainless steel lathing and 'Spirotie'. The wall was repointed and grouted in stages by gravity pressure.
CORE REPAIR MIX. 3 sand : 1 hydrated lime
RUBBLE WALL POINTING MIX. 1 white cement : 3 lime putty : 6 sea sand : 4 yellow sand : 2 concreting sand.
GROUT. 1 lime : 2½ PFA supplied by 'Pozzament' in 25 kg bags.



TIMBER REPAIRS
Only traditional repair techniques have been employed without the use of glue or resins. A filler was used in enlarged pegholes to retain as much of the original fabric as possible. Stainless steel or galvanised mild steel brackets have been inserted in some places for the same reason. Generally dry oak has been used to make joinery, small repairs and new framing members around the windows. Green oak was chosen for most of the new framing members, larger repairs, rafters, floor joists and the like. Beam ends built back into stonework and the interfaces of new and old oak have been treated with a mayonnaise type preservative.
PRESERVATIVES. 'Woodtreat 55' and 'Wykamol Plus'. (No oats were living in this building).
FILLER FOR ENLARGED PEGHOLES. 'Belzona Remouldable Wood' used as follows: Resin + 8 parts catalised wood powder with 1 yellow ochre, 1 raw umber and 1 pozzament grout to achieve colour.

PANEL INFILLING
Plaster has been applied to a matrix of riven oak laths. The mix has been chosen to match the original plaster on a surviving panel.
FIRST COAT. 1 white cement : 6 lime-putty : 1 sea-sand : hair.
SECOND COAT. 1 white cement : 6 lime-putty : 1 sea-sand : 1 brick dust : hair.

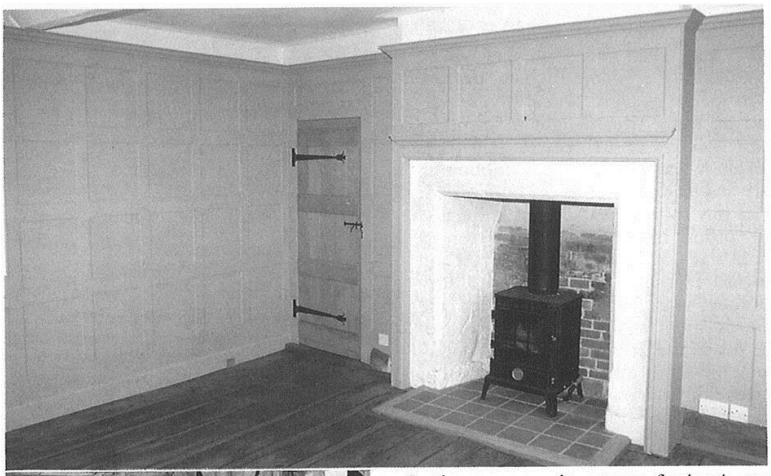


East elevation. Proposals

ations over the gate arch but witheld objection for the sake of the overall project and the future welfare of the building. This is a good example of conflict between the requirements of a building which will remain unoccupied and the requirements of one which, to find a secure future, has to be converted for domestic use. A degree of compromise is often necessary when such situations arise.

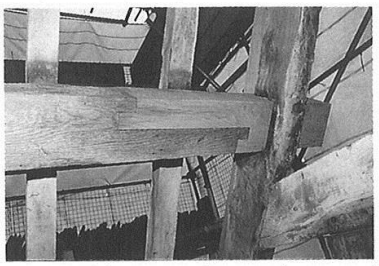
Accurate prediction and cost control are becoming increasingly important in the economic climate of today. Grant providers are not usually able to increase their original allocations to cover overspent projects and building owners need to carefully plan the expenditure of their scarce resources. To achieve these ends the Quantity Surveyor designed a composite document comprising preliminaries, preambles, specification and schedule of works. The document also included a list of provisional repairs compiled by drawing upon past experience of similar work on historic buildings.

It was necessary to specify the repairs in great detail with, for example, special reference to the timber frame. Following a meticulous measured survey all the framing members were allocated a reference number and code, (eg. P12 is post no.12). Each part of the frame was examined and recorded in a schedule which specified the code number, description, section size, defects found, repairs required and volume of oak involved. Every operation could therefore be priced by time and materials based upon



In the room over the gateway floorboards were repaired using the methods described in SPAB Information Sheet 10 "Patching Old Floorboards" by Philip Hughes.

Hydraulic jacks were used to remove eight of the 12 inches of subsidence in the east wall.



A tounged lap joint used to extend a truncated purlin end.

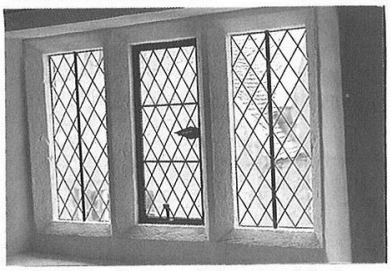
the contractor's past experience of similar work. Each repair was reappraised on site after closer examination following careful removal of the adjacent panel infilling and discussion with the carpenter involved.

The chosen method of documentation proved successful in that the final account was below the contract sum despite variations made during the course of the work.

Archaeologists were closely involved throughout the project. The Shropshire Archaeology Unit recorded findings below ground and the Hereford Archaeology Unit studied the building. Their work greatly assisted us in our understanding of the gatehouse.

One unusual aspect of this project was the wide variety of materials and constructional forms requiring various types of treatment. Structural problems in both timber framing and masonry walling had to be tackled before we could begin the painstaking process of cutting in patches to floorboards, timberwork, ashlar, rubblework, stone dressings, brickwork, wall plaster, plaster mouldings and plaster ceilings.

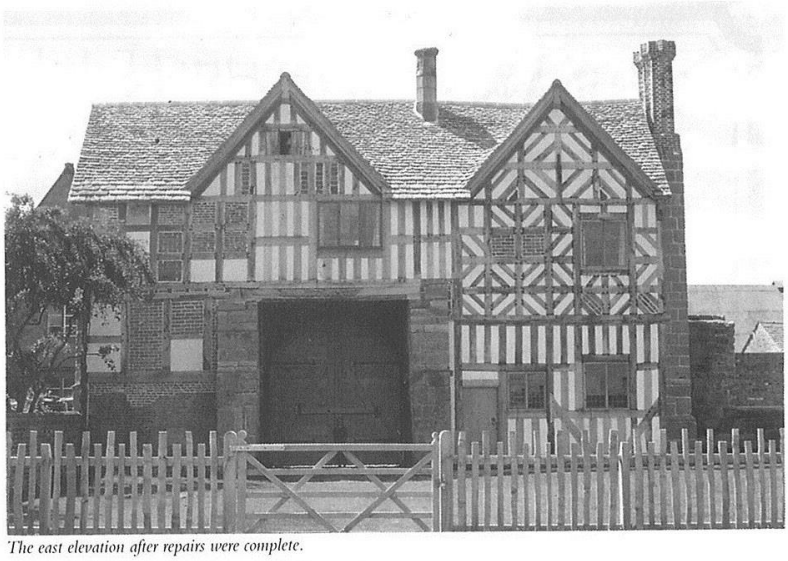
The north, south and east walls contain a mixture of brick and plastered lath panel infilling because, as the original lath and plaster decayed, it was replaced by brickwork. The brick infilling was originally skimmed with plaster and finished with limewash. We would have preferred to repeat this treatment but deferred to English Heritage who felt strongly that the brickwork should remain unlimewashed.



A surviving fragment of the original lead came matrix enabled us to reproduce the leading illustrated in a drawing of the west elevation dating from 1789. The provision of some opening lights was a practical necessity.

The repaired west elevation.

ASHLAR WALLING
The ashlar on the upper part of the west wall was not voided. It has been repointed using a mortar mix to match the original.
POINTING MIX
1 white cement : 6 lime putty : 1 sea sand : 1 brick dust.



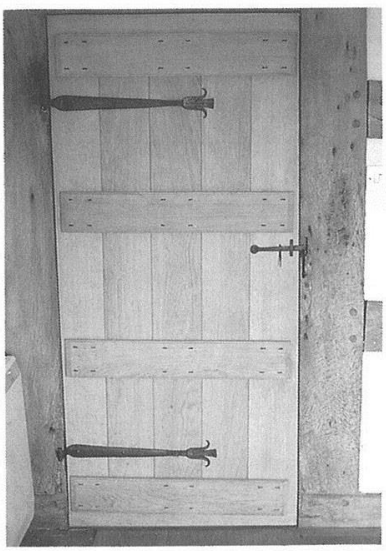
The east elevation after repairs were complete.

The derelict condition of the gatehouse necessitated replacement of missing floor joists, floorboards, staircase, doors and windows. The small room over the gate arch contained evidence indicating that it was lined with panelling at some time. We repanelled this room using painted softwood framed and detailed in the traditional manner.

The design of our new joinery and ironwork incorporating period detail and ornament in the Arts and Crafts tradition may shock some conservation purists. The argument against new fittings in period style is that their presence will deceive the scholars and historians of the future. We have taken great care in what small amount of the fabric we have removed from this building, only doing so by necessity during repair. I offer no apologies for what we have added because the extent of original fabric has been carefully recorded in archaeological archives. Visitors who stay in the building may attain a clear understanding of its history and how it was repaired and converted by studying the information 'album' provided in each Landmark.

INTERNAL PLASTERING
The surviving plaster ceilings have been repaired by cleaning away all dirt form the laths, inserting trays of brass mesh between the floor joists and pouring casting plaster to bond both together. Missing laths have been replaced with laths of riven oak. New soffits and partitions are being clad with stainless steel eml to receive lime/hair plaster. The finish will generally be limewash.
PLASTER MIX. 1 white cement : 8 mature lime-putty : 24 sea-sand : hair.
COARSE STUFF. 1 lime : 3 sand : hair. Gauge by adding 1 part white cement to 24 parts coarse stuff. The purpose of gauging is to speed up the setting time and reduce cracking.

BRICKWORK
The main chimney corbel table has been rebuilt and badly eroded bricks have been replaced elsewhere in the stack. Brick panel infilling was removed, stored, and reinstated following repair of the timber frame.
BEDDING MIX. 1 white cement : 4 putty-lime : 12 sea-sand.
POINTING MIX. As used on the ashlar.



A new door made from dry oak. The ledges are secured to the boards by clenched iron nails. New hinges hang on the original pintals.

Iron was used for making new latches, hinges, bolts etc. We had to resort to the use of mild steel only when making the hinges for the main gates.

Architect: Andrew R Thomas.
Quantity Surveyors: Bare Leaning & Bare.
Main Contractor: Treasure & Son Ltd.