**CHAPTER 6/Buckden A Huntingdonshire Village**

**BRIDGE HOUSE, CHURCH STREET: A SHORT HISTORY**

**Christopher Bates**

Bridge House is believed to be the oldest surviving property in Buckden. The house was built in 1458 and when first completed was an open medieval hall and a building of high status. Over subsequent centuries the house has seen many changes to its structure and also to the village in which it stands. Its survival is testimony to the strength and quality of the construction. In this chapter its owner, Christopher Bates, tells the continuing story of its restoration—and in a postscript explains why in a house with a very long history you may not always be as alone as you think….

I have owned Bridge House since 2004 and have endeavoured to restore the house to its former glory, utilising wherever possible traditional materials in keeping with the original construction. These materials are able to move and breathe with the existing structure, thus ensuring its continued survival for many years to come.

During the course of this ongoing work I have made many exciting discoveries and also made many new friends in the village. I feel very fortunate to have the privilege of living in such a beautiful home in a wonderful village.

**Medieval open halls**

Until the middle of the sixteenth century most people of status lived in a space which was open to the roof, heated by a fire burning in a hearth built on the floor. The hall was always the largest room in the house, open from the ground to the apex of the roof, which besides being the focus of daily life for a large household was also intended as a place of assembly for the transactions of public business, such as the manorial court.

The principal features of medieval halls, despite some regional variations, were basically the same. In or near the centre of the hall was the open hearth, the smoke escaping as best it could through the small gablets at the junction of the hips and ridge of the roof. Beyond the hearth was the upper end, which was occupied by the family and contained the high table and bench. The bench was usually fixed, being no more than a long narrow plank attached to the high end wall of the hall. Most of the light in the hall came from tall unglazed mullioned windows on either side of the high table.

Halls were entered directly through a door in the front elevation (the north elevation in the case of Bridge House: the curved head of the original front entrance remains, although this is no longer the entrance to the house). A cross-passage ran between a pair of opposed doorways in the front and back walls.

On one side of the passage were two doorways leading to the service accommodation at the lower end of the house, the buttery (for beer), and the pantry (for bread). The two service doorways remain in Bridge House. This is a very rare survival as so often internal alterations led to their removal. The doorways are now blocked by the insertion of a later brick chimney into the cross-passage. On the other side of the passage there was a screen dividing it from the main hall. A visitor entering the hall through the single door from the cross-passage would first see the open fire and then, beyond, the high table.

The whole house was a hierarchical space mirroring the hierarchies of society: the servants at the lower service end, the cross-passage entrance, the screen, the lower bay of the hall with the high table beyond, and the private apartments entered from the upper end.

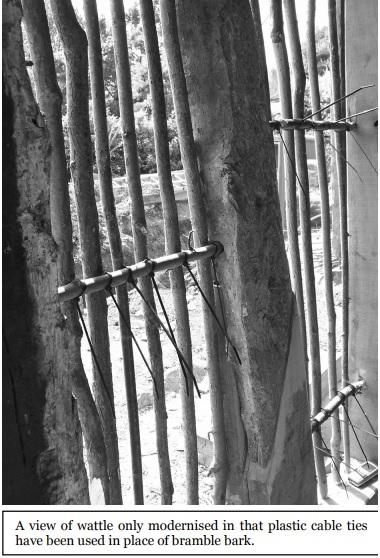
Bridge House, in addition to the open hall, has a cross-wing at the upper (west) end, accommodating the family on the upper floor and most probably a shop front, with workshop behind, on the ground floor. In keeping with the high-class workmanship at the upper end of the house, the front elevation of this cross-wing was jettied (upper storey projecting over the ground floor). The window at first-floor level in the front gable was of a projecting type, and the jetty was supported by a beam known as a bressummer, whose ornate carving further demonstrated the wealth and importance of the owner.

**Construction of Bridge House**

Oak is the predominant timber in the construction of the frame, although a fair amount of elm was also utilised, reflecting the local timber available to the original carpenters. Oak has great strength and resistance to rot, and when allowed to dry naturally is actually improved and hardened with age. Elm, when grown in woodland conditions, grows taller than oak so was employed on members where great length was required. It is somewhat inferior to oak in that it is less resistant to damp and insect attack.

Dendrochronological examination has shown that the timber was felled in 1457. It would have been worked within a year of felling, when it was still green and soft, allowing it to be cut and the joints made. As the sap dried out, the timber hardened until it was almost too hard to cut. The drying process continued after the frame had been erected, with the timber warping and twisting, causing the undulations of line found in all old timber buildings.

The trees were felled with a narrow axe. The larger trees were split into baulks and shaped with a broad axe. Timbers were usually cut from a tree just large enough to produce the section required. All the large timbers in Bridge House contain the heart of the tree, a term referred to as boxed heart, which means simply squared from a whole trunk. Smaller timbers were generally halved from the squared baulks. As the timbers were cleft, the grain of the tree ran true along the beams, giving them much greater strength than modern sawn timbers. Curved braces were cut from curved branches of larger trees. It is estimated that approximately two hundred trees would have been felled in the construction of Bridge House, varying in size from nine to eighteen inches in diameter.



With the timbers prepared, the next stage was cutting the joints. The carpenters’ tools available were adzes, axes, chisels, basic planes, hammers and mallets, shell augers, scribing tools and chalk lines. Considering the basic nature of these tools, the carpenters produced work of astonishing skill and ingenuity. The joints used were mortice and tenon, half lap, or scarf, the mortice and tenon being the most important and the basis for the framework. Scarf joints were utilised to join shorter beams together to produce one continuous length. After cutting all the joints, the framework was assembled on site. Many strong arms would be needed for the rearing and building; however, the majority of members were assembled one by one. Almost all the beams could be carried by one or two men. A rope and pulley would have assisted in raising the larger beams. As the work progressed, scaffolding would have been used, consisting of poles lashed together with woven wattle panels as platforms. During erection the frame would have been supported on temporary blocks which were replaced after completion with a low stone plinth.

All the joints were held together with oak pegs driven into holes drilled through the mortice and tenons. Metal fixings were not used. The pegs were tapered so that as they were driven home the joint would be pulled tightly together.

The original roof covering would have been thatch. Reed provided the best quality thatch but wheat straw was also used. At a later date the thatch was replaced with peg tiles. These would have been produced locally from the Cambridgeshire gault clay. When fired this clay forms tiles of a distinctive yellow colour. The tiles derive their name from the small timber pegs driven through holes in the tiles and hooked over the laths. Over many years of repairing and re-roofing, a proportion of red tiles have been used producing a mixture of reds and yellows. This distinctive appearance has become known as the Huntingdonshire mix.

The panels between the timber framing were infilled with wattle and daub. This comprised a timber background fixed between the studs on to which was applied a layer of wet earth mixed with straw and cow dung. The wattle sticks were of hazel which was grown coppiced in local woods. Growing hazel by coppicing produces many long straight sticks from each tree. Regular harvesting encourages more shoots to grow from the remaining stumps, thus increasing the yield. Brampton wood still has large areas of medieval coppice, but while it is possible that the sticks were cut from there, it is more likely they came from Buckden’s deer park.

Holes were drilled in the top and bottom rails of each panel and long vertical sticks were cut and sprung into these holes. V-grooves were cut into the vertical studs, then short cross-pieces were wedged into these grooves. The vertical and horizontal sticks were tied together to provide greater strength to the panel. String was not yet available to these early builders, so tough bramble strands stripped from bramble bark were used. Some of these original ties still remain, giving testament to the strength and durability of the material.

The daub was mixed on site. Usually the winter before the frame was erected on site, a large pond was dug out on site. The earth that was excavated was piled up beside the hole. Over winter the hole was allowed to fill with water. In spring time the earth was thrown back into the pond, along with chopped straw. A post was banged into the middle of the pond, to which a cow was tethered. As the cow walked round and round, the pressure from its hooves acted to mix the earth and straw adding dung as it . Once thoroughly mixed, the cow was removed and then the mixed daub dug out and applied to the wattle panels. Usually the remaining hole in the ground was left to refill with water, thus forming a permanent pond. Many ponds associated with old buildings have been formed in this way.

Once all the wattle panels were covered with daub, the exterior of the house was rendered. Most medieval timber-framed buildings were rendered to protect the framework. (It was not until Victorian times that it became fashionable to strip off the render to expose the frame.) Rough split branches were fixed to the outer faces of the frame and over this was applied a render of the same daub mixture. To provide a superior finish, a thin layer of lime plaster was utilised. Limewash was painted onto the lime plaster. The wash protects the plaster and also gives a finished colour to the exterior. During the restoration I discovered that the original limewash was an orange colour. This is a limewash containing sulphate of iron, commonly known as copperas. This was widely used in this district and gives buildings a distinctive rusty colouration.

The windows were unglazed and divided with square-section mullions set diagonally about six inches apart. It was not until the end of the sixteenth century that the manufacture of glass became widespread, and so in the place of glass, oiled cloth - preferably linen - was fixed over the openings to provide some protection from the weather. In most cases these early windows were provided with timber shutters, hinged or sliding in grooves either internally or externally.

The entrance doors were simply constructed from vertical boards of varying width, secured at the back by horizontal battens or ledges and, when the door was wide, with additional diagonal braces to prevent the door from sagging. Medieval doors had no frame and were hung directly to the opening using wrought-iron hinges.

The internal floors would have been of compacted earth, strewn with rushes and straw and perhaps treated with ox blood and ashes which produced a harder surface. The internal walls and beams would be limewashed to provide some protection and also to brighten the dark interior.

**Alterations to Bridge House**

When chimneys first became fashionable, they were installed in many halls, in place of the open hearth whose smoke drifted out through the roof. This led to the idea of other rooms being heated and the possibility of both an upper and lower floor having fireplaces. The roof of a hall was usually lower than any cross-wing, and most halls were altered in the sixteenth and early seventeenth centuries to raise the roof and install an upper floor. This was the beginning of a period known as the great rebuilding .

Chimneys were often built in part of the cross-passage, on the back wall of the hall and on the side or back wall of a cross-wing. At the same time, glass had become cheaper, and when a hall was altered, the windows were often blocked up and new, larger frames incorporated. Halls sometimes had windows from floor to ceiling, and with the addition of a new floor, these had to be altered to accommodate two stories. The roof was often levelled up to match that on the cross-wing, and service ends were altered to provide kitchens with their own fireplaces. The rooms now started to have different uses, with more accommodation upstairs for sleeping chambers, and more private family rooms downstairs.

The main chimney in the cross-passage of Bridge House was built in 1593. At the same time an upper floor was inserted into the main hall, creating private rooms for the family upstairs. Families were no longer willing to share their daily lives with their servants and sought greater privacy, which the new firstfloor rooms offered them. The chimney in the cross-wing was not constructed until 1680. This chimney incorporated its own bread oven to supply the needs of the family.

The mullioned windows were replaced with sash windows which slid horizontally, partly due to the low ceiling. These windows are known as Yorkshire sashes. The old window openings were usually reused for the positioning of the new glazed frames. Often these openings were enlarged.

With the blocking of the cross-passage by the new chimney, the main entrance to the house was moved and re-sited at the junction of the main wing and the cross-wing.

The earthen floors were covered with brick pamments (a type of floor tile) to provide a more serviceable flooring, and many of the internal walls and beams were limewashed with a strong Prussian blue colour, another demonstration of the owners’ wealth.

In more modern times the original lime render had been replaced with a cement render and the outer walls painted with masonry paint, both unsuitable. A bathroom was installed on the first floor and also central heating in the form of electric storage heaters. Electric lighting and power sockets were installed in, I believe the 1930s. During the same period the roof timbers of the main range were unfortunately replaced with softwood rafters, probably due to failures in the original structure.

**The Bridge**

Bridge House takes its name from the humpback bridge that used to carry Church Street across a stream directly to the west of the main building. The stream was the overflow from large fish ponds in the grounds of Buckden Towers. There were originally three large ponds which provided a constant source of fresh fish to the residents of Buckden Palace. They were joined together to create the large lake that still remains today. It is very likely that these ponds were formed due to the digging out of the clay to be used in the manufacture of bricks on site during the construction of Buckden Palace. The stream linked the ponds with another lake which is in an area known as the Valley, which is adjacent to the modern playing fields. The stream was originally open but has since been diverted into a culvert under ground. This still runs through the garden of Bridge House and can be accessed by lifting a large stone pad. The bridge has disappeared with the piping of the stream, but the house’s name serves as a reminder.

**Restoration**

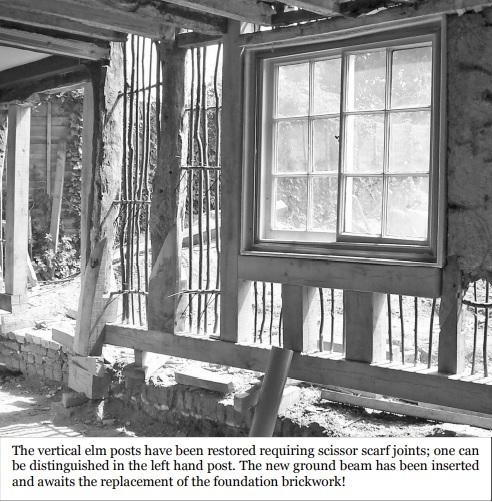
During the course of restoring the structure of Bridge House I have endeavoured to use materials and techniques sympathetic to the building. Traditional materials allow movement in the timber structure and also allow the building to breathe, which is essential to its future. 

The modern cement render and the masonry paint created an impermeable layer which trapped moisture inside the building. This moisture was absorbed by the daub and also by the frame, and was unable to dry out. Modern paints used internally also exacerbated this problem. In this damp environment the timber frame suffered greatly, with the sole plate all but rotting away and the bases of all the posts decaying. The elm posts suffered much greater damage under these conditions than the oak. If left to decay in this manner, the frame would have eventually failed resulting in serious damage to the structure. Where the daub had failed, it had been replaced with a mixture of inappropriate materials: bricks, concrete blocks and plasterboard.

The kitchen extension to the rear of the cross-wing was a very poorly built single-storey structure approximately a hundred years old. As part of the listed building consent, I was granted permission to replace this with a two-storey extension consisting of a kitchen with a bedroom above. The materials used for this part were in keeping with the existing structure, handmade brick and local peg tiles. The pitch of the roof was matched to that on the cross-wing, but the roof line was set lower so that the extension is subservient to the main building. The Conservation Officer requested that the extension should be brick to be an obvious contrast to the timber frame building. Dressed splayed brick lintels were made for the window and door opening, and ‘tumbling’, a traditional detail, was applied to the brick courses of the gable end.

The repairs to the main building were carried out carefully by hand to avoid unnecessary disruption and loss of existing materials. The cement render was removed in sections, thus exposing the decayed framework. Where existing daub was still present, every effort was made to keep it in position. Where this was not possible, mainly due to the failure of the wattle through rotting in the damp environment, then the daub was removed and stored on site. This daub was eventually re-invigorated through the application of water and remixing with chopped straw. The daub could then be applied to the repaired wattles.

As each section of framework was exposed, the decayed timber was cleaned back. It was amazing that, though visually very poor, the timbers cores were still sound. Each piece was assessed and then new feet were spliced onto the bases of all the posts. The maximum amount of existing material was retained. The new pieces were joined with a joint called a scissor scarf which is a double sided splice joint that provides great strength. The joint tightens the more pressure is applied to it from the weight of the building.



The new posts were joined into the replacement sole plate with mortice and tenon joints. Where greater length was required the sole plate was extended by joining pieces together with half lap joints. The new sole plate was supported in place on pairs of timber wedges which were driven home to tighten the joints. Once completed, each section of frame had its brick plinth rebuilt to the underside of the sole plate. Bricks recovered from site were laid with lime mortar. When the mortar had set, the timber wedges could be removed and the building once again sat on its plinth. One section of the plinth contains square-cut stone blocks which were probably robbed from a local Norman building.

Where the wattle was missing, holes were drilled in the sole plate and new vertical hazel sticks sprung into the openings. Cross-sticks were wedged between the timber beams and the vertical and horizontal sticks tied together. The daub could then be reapplied to the wattle panels. This was carried out by two people working from either side, a messy business!

The internal floor level of the building had been raised approximately eight inches. This was probably to counteract damp problems, as over many years the outside ground level had risen considerably, by around eighteen inches. Through digging a test hole I was able to establish the original internal floor level and was granted permission to return to this level. This eased the problem of poor headroom internally.

During the course of digging out the raised floor, in which I was assisted by my dad, we uncovered many buried artefacts: coins, clay pipes, bottles, pottery and bones—mainly things that had been thrown away, but of great interest. The bones we unearthed became of much greater interest when the local police arrived, having received reports of human remains being discovered! The bones were taken away and we were most surprised when the officer returned to report that they were in fact human bones, not the animal bones that we had suspected. Luckily they were even older than the house, so the case was not pursued.

Underfloor heating was installed throughout the whole of the ground floor. This should provide a comfortable and even temperature, which will be less stressful for the house than the sudden temperature changes associated with radiators.

The roof to the rear of the main wing was failing, so the peg tiles were carefully removed and cleaned. Unfortunately the previous roofer in the 1950s had bedded them all in cement mortar where they overlapped. This created much work in cleaning off the hard cement from the old tiles. The roof was rebattened and the old tiles returned to their place. Some new handmade tiles were mixed in to account for the broken and missing tiles.

The two chimney stacks were repaired. The modern cement pointing was raked out and replaced with lime mortar. The lime mortar is softer than the bricks, so any moisture escaping from the chimney passes through the mortar and not the bricks. With cement pointing the faces of the bricks are blown off in frost. Any badly damaged brick was carefully removed and, where possible, turned around so the fresh face was showing. Where necessary the gutters and downpipes were repaired with matching cast-iron products. Most of the original gutters were cleaned up and repainted.

The front door was sympathetically repaired by splicing in replacement timber where there was a need for repairs.

The whole of the exterior walls was lathed with oak laths. These were fixed to oak counter battens fixed to the frame. Stainless steel fixings were used as the tannic acid in green oak quickly attacks plain steel. To fix the laths I used over 12,000 nails. Once they were complete, lime render was mixed on site using premixed lime putty and plastering sand. These were mixed and then stored in a heap, covered with tarpaulin for at least three months. This allows the render to improve with age. After three months the render is remixed and at this stage goat hair is added to provide more strength.

The render was applied in three coats. The walls were protected by hessian which was hosed down daily to prevent the render from drying too quickly and to limit cracking through shrinkage. Once the render had dried, at least six coats of limewash were applied by brush, the wall first being dampened. As previously mentioned, the finish was limewash containing sulphate of iron to produce the distinctive rusty orange colour.

As the ground level outside is still higher than the internal floor level, a French drain was installed around the whole house. This consists of a perforated drainpipe buried in a trench of pea shingle. The pipe drains away from the house and I arranged it to outfall into the underground stream in the culvert. This drain carries away any water in the ground directly adjacent to the house.

I am hopeful I may be allowed to replace the missing projecting window from the front gable of the cross-wing, which is at the moment is just an opening uncovered by the removal of the modern render. Internally, there is much work left to complete, which I am now concentrating on.

A final word of thanks to all the family who have helped tremendously with their tireless support and practical help, and to my friends who have kept me cheerful throughout. A special thank you to my fantastic neighbours Richard, Melanie, Heather and Howard for their constant support and cups of tea. And finally to all the residents of Buckden, including members of the Local History Society, to whom I have so enjoyed chatting.

**Ghost stories**

In a house that has been occupied for five and a half centuries, there are bound to be a few residents reluctant to leave... With a property of such age, built in 1458 during the reign of Henry VI, it is inevitable there are stories of ghosts in residence. I can only recount my personal experiences and leave it to readers to come to their own conclusions. The first night I stayed in the house, having only just moved my possessions in that day, I was sat alone in the sitting-room. The room was lit only by two small wall lights either side of the large inglenook fireplace, which at that time was bricked up to form a small grate centrally. The rest of the house was in darkness. Suddenly both lights began flashing, on off on off on off... this continued for approximately thirty seconds whereupon they returned to normal. I put this down to the old wiring but this incident was never repeated.

Peggy, a friend of the previous owner Miss Beckwith, called in to introduce herself. In the course of our chat Peggy was telling me what a lovely house Bridge House was. She recounted happy memories of her time spent here among friends. Her only reservations concerned the bedroom in the cross-wing at the front of the house. When I told Peggy that I was currently sleeping in this room she became concerned. Peggy had slept in this room when she was staying with her friend whilst she was searching for a house in Buckden.

In the morning, she was awake but lying in bed dozing with her eyes shut. The room door was closed and there was no one else in the room with her. Suddenly she became conscious of an animal having jumped up on to the bed. She could feel the weight of the animal upon her and then felt it walking up her body, turning round and round upon her chest in the manner of a dog settling down. Then the weight of the resting animal could be felt on her chest. At this point Peggy realised that she was alone in the room and opened her eyes with a start. The pressure upon her vanished and there was nothing to be seen.

One evening I invited some friends round for drinks. We had a very pleasant evening sitting in the old kitchen. One of my guests, who had an interest in the house, said that if there were ghosts I must talk to them, letting them know my plans for the restoration.

Well, after a few drinks and a long evening I bade farewell to my friends and was left alone sitting in the kitchen. Mindful of my friend’s advice, and conscious that the kitchen was due to be demolished, I took this opportunity to tell anyone listening of the building work to be done. Talking out loud I discussed the alterations and re-iterated that anyone there with me was very welcome to stay once the new kitchen was completed. At this point I suggested that they could give me a sign that I wasn’t alone and talking to myself. Nothing happened, so I contented myself that I had been foolish and got up to go to bed. As I left the kitchen there was a clear click noise, very noticeable as I live alone. I felt it was strange but didn’t attribute it to anything. At this point I noticed another sound, it was water bubbling, beginning to boil in the electric kettle. The kettle, which stood on top of the fridge, had switched itself on and was now boiling. This was completely unexplainable. I switched it off and quickly rushed upstairs. The following morning I tried to repeat the kettle switching on, maybe it hadn’t been switched off properly, but I was unable to switch it on without a definite firm click. The kettle never switched on in this manner again. I have now purchased a new kettle.

Upon returning home one afternoon I walked upstairs to the new bedroom and en suite bathroom above the kitchen. As I entered the bedroom I noticed a large puddle of water coming from under the bathroom door, which was closed. Thinking there was either a tap left on or a leak, I opened the door. The sink was empty, but water was dripping from all around the underside of the sink. I mopped and dried up all the water expecting to discover the source of the problem. Once dry, there was no leak at all; it was only as if the sink had been allowed to overflow and then someone had switched the taps off. The house was empty and I was the only person with a key.

But this incident was due to a dodgy tap............

All I can say is that I get a fantastic feeling that this is a very happy house and if there is anyone here with me, then I think they approve of the care and love I am investing in restoring Bridge House to its former glory.

