



case study 3

Award winning extension

When his in-laws wanted a sympathetic extension to their cottage, architect Julian Owen had to overcome several problems, not least modern building regulations

Right: A detail of the extension showing the horizontal sash windows and reclaimed bricks

If you were to ask a librarian for a copy of today's building regulations, you would be presented with fourteen volumes. They cover everything from structures, ventilation and fire safety to waste disposal, hygiene and damp-proofing.

At the beginning of the last century, architects were somewhat less constrained!

Striking a balance between the mandatory requirements of modern living with the need to preserve our ancient heritage presents a host of problems for architects restoring, modernising, or extending period properties.

One such architect is Julian Owen who was invited to design a 825 square feet two-storey extension for his in-laws' small, two-bedroom semi-detached cottage at Tollerton in Nottinghamshire.

The cottage, which once served as the village post office, was built at the beginning of the 19th century, although part is believed to be late 18th century.

The new extension, built at right angles on to the kitchen and bathroom end of the existing cottage, was designed to provide a rear entrance hall, dining room, down-

stairs washroom and toilet, a pantry, a third bedroom with ensuite shower, and an upstairs utility room. Access would be provided by a second staircase.

"Chris and Hazel Salisbury had a very clear idea of what they wanted to achieve, and to have an informed client is a major benefit in a project of this nature," said Julian.

"It is also important to engage a contractor who has had considerable experience on this type of development. I cannot speak too highly of the contractors we employed on the cottage extension, CR Carne Ltd of West Bridgford, Nottingham, who were able to help overcome the various difficulties we encountered.

"One of the first problems we had to overcome was that the rooms in the new extension had to have higher ceilings in relation to the larger floor areas, so neither the windows nor the roof were going to line up.

"Also, the original cottage floor was almost at ground level, whereas modern building regulations require two brick courses above ground level for damp coursing."

Julian decided to let the new wing be clearly seen as a sympa-



thetic extension, choosing reclaimed pantiles to contrast unashamedly with the slate roof of the original cottage, but taking care to express the two structures as one unit.

Attention was given to making the different roof pitches and ridge heights relate to one another.

"The cottage had a collar roof, where part of the roof-pitch is visible inside the rooms. I could see that the existing roof timbers would not be able to take any additional load, so I made the new roof self-supporting, with modern



Left: Prefabricated truss rafters were used in the extension to make the roof self-supporting. However, traditional building methods were used at the point where the new and existing roofs joined

Opposite: The architect chose pantiles for the extension to contrast with the existing plain tiles



prefabricated truss rafters bearing down onto the walls of the new extension. However, traditional building methods were used at the point where we joined the two roofs together," Julian Owen said.

Reclaimed bricks from the demolition of an early 19th century colliery building ensured a perfect match between new and old, but there still remained the problem of how the brick pattern of a cavity wall could be made to simulate the solid wall construction of the existing cottage.

"We achieved this by using snap-headers in the outer skin of the cavity walls, which created the illusion of a whole brick being laid through the width of the wall at the appropriate point in each course," said Julian.

The cavity walls had also caused a problem with the positioning of the new windows. These were designed to match the traditional Yorkshire horizontal sliding sashes on the original cottage, but whereas in a solid wall construction frames are set back into the

brickwork by half a brick's length, in cavity walls they have to be positioned in the outer skin.

"My father-in-law was quite insistent that the eight windows in the new extension should remain in character by being recessed, so we had no alternative but to align the front edge of each frame with the back of the outer leaf of the cavity wall, and use extra rendering and sealant to make it weather-proof" said the architect.

"Matching the 19th century cogging around the eaves was another area of difficulty caused by the thicker cavity walls, and called for some highly skilled bricklaying by the contractors.

"This effectively sealed the continuous ventilation along the eaves, which building regulations insist should be left to provide the necessary air circulation inside the roof space. To overcome this, we used a special eaves ventilator and put a mock Dovecote in the gable end," said Julian.

Another ventilation problem was where to locate the air-intake for the drains.

"We didn't want to stick a pipe straight through the roof, so I designed a detail where the pipe went up to the ridge, the ridge tile

at that point having gaps around it to ventilate the pipe to the open air. We had to search all over England to find one that fitted flush with the other ridge tiles without creating a bump in the roof line".

A feature of the sitting room in the original cottage is a pine-beamed ceiling, and the Salisburys wanted the ceiling of the new dining room to look exactly the same. A keen amateur archaeologist, Dr Salisbury had cut the new beams himself to match the size and shape of the originals, even to the extent of using

a traditional axe.

"Unfortunately, building control officers will usually only accept properly stress-graded, tested timber in load-bearing situations, so we had no alternative but to fix the pine beams to the underside of the ceiling joists, leaving the ends of each beam to be cloaked by the plaster boarding on the walls," said Julian.

The extension has received a design award, which goes to prove that modern building regulations don't have to present insurmountable problems for those prepared to use a bit of imagination. ▣

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