

Cob makes a comeback

The mud-and-straw method of building is enjoying a remarkable renaissance in Devon. CLIVE FEWINS visits modern examples of this ancient technique

THE search for ever-more sustainable building materials has led to a surprising rebirth of the use of cob in recent years. Traditional cob walling, as seen in the new houses featured here, involves mixing a clay-based subsoil with straw, water and sometimes an added aggregate in a large pit. No shuttering or timber-framing is used, which gives cob walls their wonderful sculptural quality. The cob mix is forked onto the wall and trod down every 6in or so, a process that is repeated to form a lift of about 2ft. After being left to dry for a couple of days, the lift is pared with a sharp spade or mattock, and finally dressed into shape with a large mallet.

Cob was used most commonly in the clay-rich West Country, but there are also areas of chalk and clay cob in Hampshire, Wiltshire, Oxfordshire and Northamptonshire, and a similar mix forms Norfolk clay lump and Cumbrian clay dabbins, although these used very different building techniques.

In Devon, it is estimated that there are some 20,000 cob houses. However, for several generations until the 1990s, new-builds in cob were almost unheard of. Then, inspired by retired Devon builder Alfie Howard, Kevin McCabe decided it was time to build afresh with this most sustainable of materials. A few others have followed in his footsteps, although Mr McCabe remains the only builder working in cob commercially.

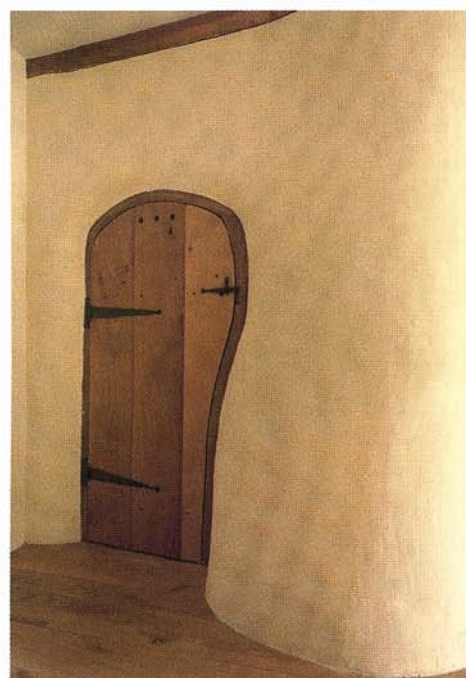
Mr McCabe bought his first cob house, which dates from the late 17th century, in 1984, and learned about the material when restoring it. In 1994, he rebuilt a cob barn as his family home, using the existing foundations, but extending the original footprint of the building in what he believes is the first cob dwelling to have been built in England since a cob-walled bungalow was

Cadhay, near Ottery St Mary. This new cob house was built for the Gascoigne-Pees

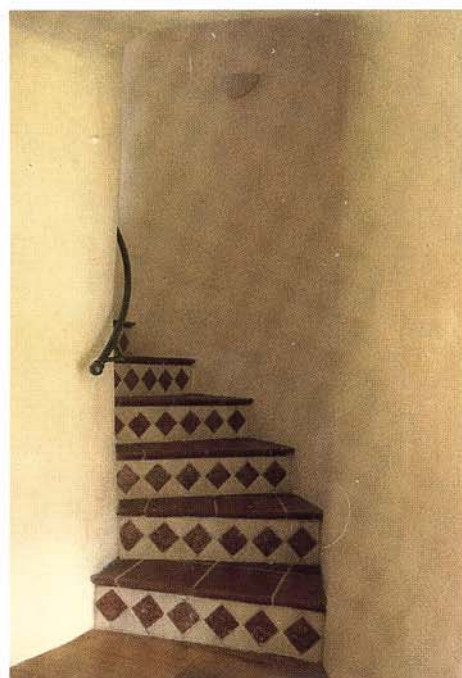




The top of the stairwell at Cadhay. It makes play with the bulbous volumes of the house's exterior



At Cadhay, The interiors feel charmingly traditional with their sculptural, irregular forms



All about cob

- Cob is made by mixing together clay, sand, straw, water and earth. This mud-based mixture has been used since the Middle Ages
- To create a wall, layers of cob are ladled on to stone foundations and packed down. Each layer must dry before the next is added
- Cob walls are generally about 2ft–3ft thick and, therefore, retain heat in winter and create cool rooms in summer. Cob has a very long life span if it is kept dry
- A cob house will need about 20% less energy to heat compared with a typical modern house meeting the same building-regulation insulation requirements



- Building a 2,900sq ft house costs about £350,000. The cob part of this is £50,000
 - Cob is mostly associated with Devon and Cornwall; the Vale of Glamorgan and the Gower peninsula in Wales; Donegal Bay and Munster in Ireland; and Finisterre in Brittany
- Kevin McCabe, Cob Building Specialists, runs workshops in cob building (01404 814270; www.buildsomethingbeautiful.com)*

constructed in Sidmouth in the 1920s.

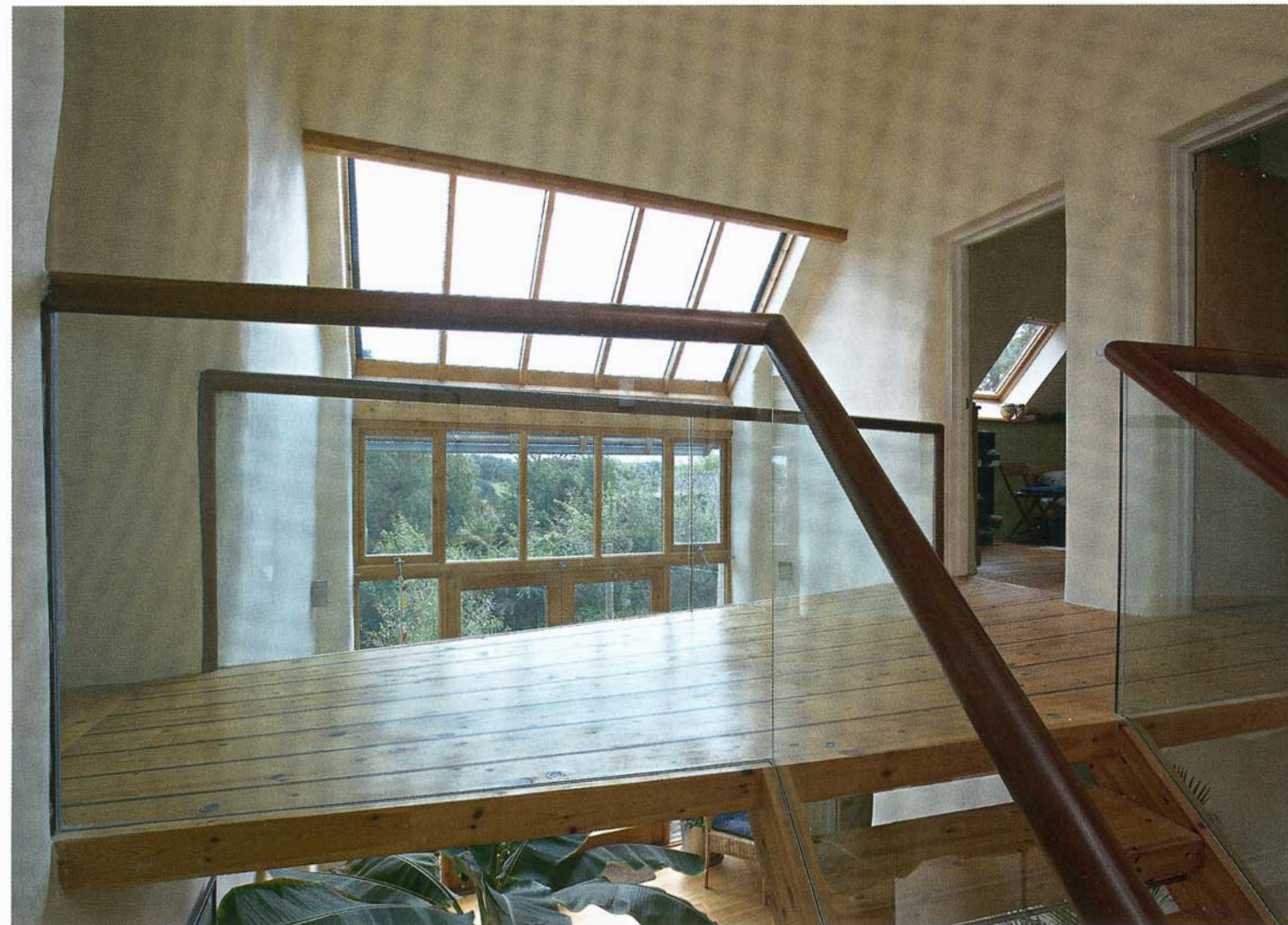
'Cob is such a wonderful material from the environmental point of view because it comes straight out of the ground and so involves no manufacturing costs,' he says. 'It's also entirely recyclable. All my research shows that new-builds in cob need about 20% less energy to heat than typical modern houses built with bricks and blocks and meeting the same insulation requirements.'

'Because of the cheapness of the materials, cob houses cost no more than typical new-builds, despite needing a bigger roof area to cover the thick walls. My view is that cob is also very healthy to live in, because earth walls easily absorb moisture from the atmosphere and release it again when the air dries out. This gives earth buildings a higher background humidity than a typical new house and makes them more comfortable inside.'

Mr McCabe favours the curved, sinuous shapes that characterise many of Devon's old cob buildings. His current house near Ottery St Mary, which he built in 2001–2, is kidney-shaped with a steeply thatched roof. He likes to stress the simple beauty of cob and the rugged forms it is capable of producing. 'Sculptural' is one of his favourite words: once he has created a great mass of wall, he loves paring down the material to the shape he requires. It is highly appropriate that Mr McCabe has named his website www.buildsomethingbeautiful.com

However, the house in Dittisham, near Dartmouth, that he is currently building to the design of local architects Bedford and Jobson, takes a very different form. It is far more conventional in shape and its walls are 29in thick, as opposed to the 35in walls of his own house. This is about as thin as cob walling is possible if a house is to meet the current thermal requirements of building regulations. At 29in, it can only do so if used in conjunction with other measures that reduce the building's carbon footprint. The Dittisham house will have a ground-source heat pump, and it has an exceptionally high level of insulation. The client, retired brewer Philip Unitt, says: 'We lived in an old farmhouse near here for 10 years. When this site came up at the water's edge, we were keen to have a home with the "feel" of an old house, with thick walls, ideally in a healthy, breathable material. It's very hard to transport new building materials to this site, and the soil here was found to be suitable for cob. So we applied for permission to build in cob and succeeded. As the house is squarish in plan, with hips and gables, the roof is unsuited to thatch, so we'll use reclaimed Delabole slates from Cornwall.'

In between building these two houses, Mr McCabe designed and built a second four-bedroom thatched cob house near Ottery St Mary as a speculative project. The new



Old meets new: the new cob house at Merton is distinctly Modernist in feel, with large windows and cleanly conceived interior spaces

owners, Michael and Vivienne Gascoigne-Pees, moved in during June 2007. 'Just as we had expected, we've found the house cool in summer and delightfully cosy in winter,' says Mr Gascoigne-Pees. 'I estimate that my total bills for heating and hot water will average £65 a month, as opposed to £155 a month in our previous house, which was late-17th-century and built partly of cob.'

If cob and thatch are used in combination, it's important to have a good overhang and a base to the building of stone. In the case of Mr McCabe's home, it was necessary to build the stone plinth up to a height of 20in. It was then packed with insulation to satisfy building regulations' thermal requirements that, with the arrival last year of the 'whole house' method of calculating a building's thermal

performance (the Standard Assessment Procedure or SAP), have become less rigid.

Near Totnes, a kidney-shaped, thatched three-bedroom cob house belonging to Paul and Ivana Barclay is nearing completion. Mr Barclay has built most of the house himself with a friend. The Barclays plan to use a ground-source heat pump, together with a wood-fired stove to heat the interior.

Also self-built is Jeremy and Jan Sharpe's house in Merton, North Devon. They run a specialist company (www.jjsharpe.co.uk) restoring historic buildings. 'We're delighted with the house: we used very little heating oil in the first winter,' says Mrs Sharpe.

Like the Unitts' cob house in Dittisham, the Sharpes' home was designed by Bedford and Jobson. 'Before the changes to the thermal insulation section of the building regulations in April 2006, architects were concerned about the restrictions on areas of glazing that applied to cob,' says Paul Bedford. 'Now all that has changed, and, providing the heating systems used have a low carbon output, it's possible to incorporate areas of glazing that would never have been permitted before. This in turn allows lighter interiors and exciting and contemporary designs in this wonderful traditional material.'



A view of the Sharpes' self-built cob house at Merton. It has proved easy to heat in winter