

TIMBER SKELETONS

Understanding the bare bones of a house is important as **Roger Hunt** explains.

A timber frame is quite literally the skeleton of many old houses and, just like the bones of a human body, must be treated with care. Often though it is sadly neglected with elements removed or left to rot with little thought for the effect this might have on the structure as a whole.

Various forms of construction are used in timber framing and it was the shipbuilding Saxons who brought the necessary carpentry skills to Britain. They felled great trees and fashioned them into beams which they then jointed together and held in place with oak pegs.

Oak is the traditional wood used in timber framed buildings and although it was 'green', having had little time to season, it is durable and strong. The tools used to work it were simple; an axe and iron wedges to split it and an adze to trim and square it. To saw a length of timber it was positioned over a pit so that, with one man below and another above, they could pull the saw rhythmically between them. Often the frames were laid out in the carpenter's marks - a modified form of Roman numerals to ensure that they could be re-assembled correctly.

The Great Fire of London in 1666 and the increasing call on timber for shipbuilding combined to play a part in the demise of the use of timber framing. Even so, we are left with many examples of the Medieval carpenters' art and are often surprised when we discover tell-tale beams lost beneath later work.

The idea that all timber frames should be revealed is a false one. As the quality of available timber declined, inferior timber was frequently plastered over so that it would withstand the elements and it is not uncommon to find pargetting, a form of decorative plasterwork.

However, just as original coverings should not always be removed, it is equally important not to add modern 'skins' of cement rich renders or impermeable paints. These can lead to moisture being trapped in the structure which will result in rot and deterioration of the fabric. In all old buildings the use of lime mortars, renders and limewash not only allows the building to breathe naturally and moisture to escape, but also for a degree of movement.

For all these reasons it is important to understand the anatomy of the timber frame which, in addition, often holds clues to the history and original

layout of a building through alterations to it, carpenters' marks and the absence or presence of joints and pegs.

Much of the charm of such buildings is their irregular nature caused by the movement of the timbers. Although it is essential to make repairs to the frame where timbers have rotted, been damaged or removed, trying to do more than this may harm the structure. Always call in an expert who understands and is used to dealing with such buildings to assess the problem and carry out the work. Your Local Authority Building Conservation Officer is a good first port of call and their advice is, in any case, essential before making any changes to a Listed Building.

Just as important as the frame itself are the infill panels that fill the gaps between the timbers. Wattle and daub was the earliest method and

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consists of lattice panels of hazel or willow covered in clay, dung and straw and these should always be preserved. Lath and plaster or brick nogging are also found, often replacing earlier infill, but it is important to remember that these may trap moisture and that the weight of bricks used in a frame originally constructed to contain wattle and daub can lead to problems.

Attempts to eradicate rot or beetle infestation are sometimes disastrous. Do not over react to decay, many old beams were oversized and can be saved, so always consult a specialist in timber framed buildings before calling in contractors.

One of the most common questions asked about timber framed buildings is how to clean or strip the beams. Quite simply there is no easy answer and, before such work is undertaken, one should think about the damage that might be done.

Old beams rarely have a smooth finish and are often blackened by the heat and soot of a medieval central fire. They also may have mouldings and bear signs of the tools used to work them as well as carpenters' marks. All this can easily be lost when trying to remove surface coatings. Finishes may also be hiding repairs and damage which, when revealed, can give a disappointing appearance.



RIGHT 'A' frame interior, creating a lovely living space.

ABOVE AND BELOW Lower House Farm, Tupsley, Herefordshire: Dating from around 1609 the whole building has been restored for the Herefordshire Nature Trust for use as offices. The building had, at some stage, had a cement rich render applied which had caused decay. Further decay was discovered in areas where brick infill panels had replaced earlier wattle and daub. The sole plates - the horizontal timbers at the base of the building - had rotted, as had the feet of the vertical studs, so new timber had to be jointed in. New infill panels of wattle and daub were fitted, a lime render was applied and a limewash painted over. Mullion windows have been reinstated where the remains of the originals were found. (photo Mike Poutney/Dimbylow Crump).







If the decision is made to strip or clean, a test must be carried out on a small inconspicuous area first. Mechanical methods including sandblasting should generally be avoided especially where beetle infestation may lurk below the surface. A solid looking beam can soon turn to dust. Use hot air strippers with care, thatch and dust in old buildings can easily catch fire.

Traditionally limewash was frequently used to coat beams and infill panels. Linseed oil is often suggested but attracts dust and dirt so instead, if a finish to internal beams is required, try clarified beeswax dissolved in pure turpentine and applied with a soft cloth. New timber, when used in repairs,



will look very raw but soon takes on an attractive colour so should be left unstained. When sawn timber is used the saw marks can be removed with a draw knife or adze.

The Society for the Protection of Ancient Buildings produces invaluable information sheets on all aspects of caring for and repairing timber framed buildings. It also offers advice and can supply the names of professionals with the necessary understanding of such buildings. It is also worth gaining a greater understanding of what your home might once have been like by visiting museums which display such buildings.



FAR LEFT Repairs to Charlton Court Barn, East Sussex. An early 15th century building: A steel support is used to strengthen post, rail and brace. (photo Carpenter Oak & Woodland Ltd.)

LEFT Repairs to Charlton Court Barn, East Sussex. An early 15th century building: A timber repair is used for a jowl post. (photo Carpenter Oak & Woodland Ltd.)

BELOW LEFT Charlton Court Barn with all repairs completed but still protected by steel framed agricultural building which was used to cover the entire barn throughout the period of work. (photo Carpenter Oak & Woodland Ltd.)

BELOW CENTRE Sourcing bent material: suitable bends for crucks (big curved beams) and other curved members are becoming harder to find. (photo Carpenter Oak & Woodland Ltd.)

USEFUL CONTACTS

ADVICE & INFORMATION

Society for the Protection of Ancient Buildings, London. Tel: 0171 377 1644.

WHERE TO SEE TIMBER FRAMED BUILDINGS:
Chiltern Open Air Museum, Buckinghamshire. Tel: 01494 871117.

Weald and Downland Open Air Museum, West Sussex. Tel: 01243 811348.

OAK SUPPLIERS & TIMBER FRAMED SPECIALISTS:
Anthony Hicks. Tel: 01233 733431. (surveys and renovation).

Antique Buildings, Tel: 01483 200477. (supply oak and reconstruct buildings).

Carpenter Oak & Woodland Co. Tel: 01225 743089. (Specialists in conservation and repair and the design and building of new frames).

Colin Baker, Tel: 01884 820152. (supply oak and carry out repairs).

Country Oak. Tel: 01273 833869. (supply oak, repair and renovate).

Courtyard Designs. Tel: 01886 884640. (Traditional period timber outbuildings).

Dimbylow Crump. Tel: 01981 570623. (conservation and repair specialists).

Gordon Robertson. Tel: 01705 632506 (specialist structural engineer).

Heritage Oak Buildings. Tel: 01798 344066. (supply oak, build frames and restore).

IJP Building Conservation. Tel: 01734 462697. (frame conservation specialists).

Roderick James & Co, Tel: 01803 722474. (specialist architects, design and construction).

Selected Oak. Tel: 01689 860230. (supply and build of traditional oak buildings).

Unique Oak Homes, Tel: 01492 596628. (supply oak, build frames and restore).

Whippletree Hardwoods, Tel: 01763 208966. (supply oak and build frames).