

What then do you restore, and what do you keep? When Richard Griffiths Architects was working on *Sutton House* in Hackney, East London, for the National Trust, one of the joys of the building was that it dated from so many different periods. 'What was interesting about Sutton House was that it had been altered at almost every period in its history,' Griffiths said. So the temptation was to keep all the additions. But in fact, he says, 'the repair philosophy was different in every room'. With two existing languages of construction – oak and iron from the 16th Century, and painted softwood and brass from the 18th Century – Griffiths selected a third language for his new interventions. These, which included a new draught lobby, and a new staircase (*Figure 2.8*) in place of one that had rotted altogether, were in ash and bronze.

Sutton House also included one of the most extreme examples of conservation. There was a side room with a plaster ceiling on the verge of falling, and an enormous cobweb that had evidently been there for centuries. Griffiths' recommendation was that both should be left in situ, with a security cord in front of the room so that visitors could look in but not enter – and so were not at risk. This was written into the conservation plan, but when Griffiths visited several years later, the cobweb, and the faulty plaster, had gone. Either they had been the victim of an over-assiduous cleaner, or the ceiling had finally brought itself down.

Few projects look to maintain as much of the original fabric as this, but the degree of conservation that is required varies. When *Dobelydr* in St Asaph, North Wales, was restored for the Landmark Trust, there was a determination to retain as much of the historic fabric as possible. The 16th Century house is often considered as the cradle of the Welsh language, since it was there that Henry Salesbury wrote the first Welsh grammar in 1593. A timber-framed stone building (*Figure 2.9*), it was in a very poor state, with many of the timbers collapsed inside, where Carpenter Oak and Woodland, the specialist contractor, found them and repaired them, ready for reinstatement. Chris Masters, one of the team that worked on the project, described it as 'a very extreme conservation job'. He was involved chiefly in restoring the floor beams and joists, and in some cases, where hardly any original fabric remained, would take a half-inch thick piece of timber and fix it to an entirely new beam. The finished building, an obvious and rather beautiful patchwork of old and new, with heavy timber panelling (*Figure 2.10*) as well as structure, is now owned by the Landmark Trust.

Every building is different, and for every historic building a slightly different approach will be appropriate. There is what is commonly known as the SPAB (Society for the Protection of Ancient Buildings) approach, which can be summed up as 'keep as much of the original fabric as possible'. But even this is not always straightforward, as retaining one type of fabric may be at the expense of another.

One architect who has strong views about the most appropriate approach is Julian Harrap. A lover of ancient buildings, of their technology and of the history that they embody, he believes that it is important to maintain the correct parts of a building's history – and that is not always the frame. Britain has a fantastic history of timber framing, and it has been studied and documented closely. But, says Harrap, 'You can become obsessed with the structural logic, derived from generations of carpenters' experience.'



Figure 2.8 The ash staircase replaces one that had rotted

Photo: Richard Griffiths Architects/James Morris



Figure 2.9 A restored truss is lowered into position at *Dobelydr*

Photo: Carpenter Oak & Woodland



Figure 2.10 Patched heavy timber panelling a lobby at Dobelydr
Photo: Carpenter Oak & Woodland

The problem is that if you have a building where the frame has become distorted, or even just suffered a lot of damage, then in order to repair or even rebuild it, you may have to strip away a great deal of the overlying fabric. And it is in that surface that much of the history of the building may lie. For example, Harrap recently worked on the gardener's cottage at Cliveden, where the floor is said to be pitted with the dancing stiletto-heel marks of Christine Keeler, the party girl who inadvertently brought down government minister John Profumo in 1963.

In extreme circumstances, companies like Carpenter Oak and Woodland have even taken the frame of the building offsite to repair it, although this is becoming increasingly rare, as the planners often consider that a demolition rather than a restoration. Even with less drastic projects, Harrap believes that attempting to straighten a distorted frame is often the wrong solution. This is because, once you try to repair one joint, you find every other one is out of true, and can end up doing an enormous amount of work, and frequently having to take off all the surface material in order to do so. At *St Aldate's* in Oxford, for example, Harrap instead chose to keep the distorted frame, using the external wall as a stressed skin to support it.

Another of Harrap's strongly held beliefs is that where a repair is to be made, it should be obvious how this has been done. 'If there is a failure, we will add a second, third, fourth or even fifth layer of repair,' he says. He sees this as a duty to future generations, who will want to be able to identify the repairs that have been done and their history – not only for straightforward historic reasons, but so that they can understand the best approach to take when they impose the third, fourth, fifth or sixth layer of alterations.

It is important, he says, 'to respect and respond to the whole methodology of how the building was thought of at the beginning.' Often, but not always, that will mean using the original material, because each material has its own way of behaving. But Harrap does not rule out contemporary solutions either, especially with buildings that already contain a whole mix of technologies.

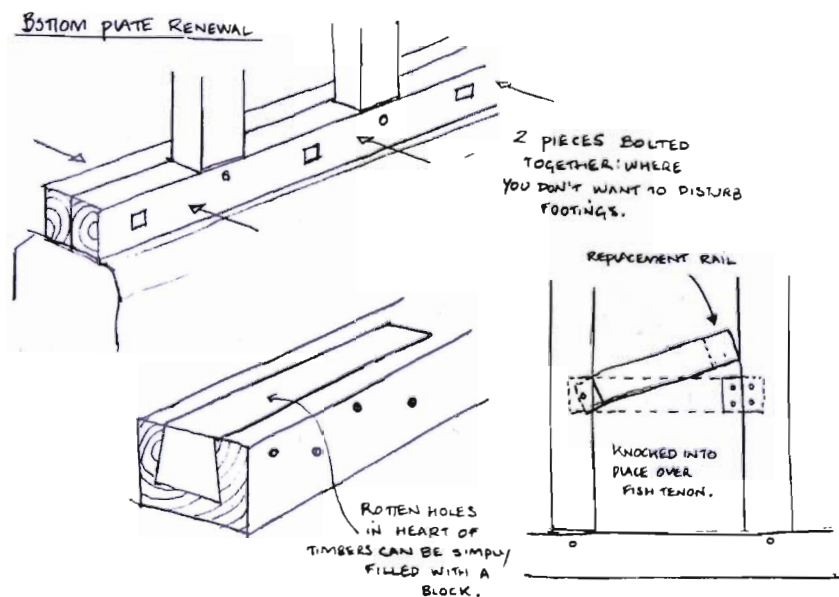


Figure 2.14 A carpenter's ideas for renewing baseplates and replacing rails
 Sketch: Carpenter Oak & Woodland

2.4.1 Timber and timber

There are many tried and tested ways of repairing timber with new timber elements, often fixed with timber pegs as well. There are scarf joints, where you cut out the offending piece of timber and fix in a new one. There are different descriptions such as halved scarfs and splayed scarfs, depending on the exact form, and an expert carpenter will decide which is most appropriate in which instance. The underlying principle is that you create a long bearing surface between the old timber and the new timber, so that there is plenty of space for fixings and for the two to bond. *Figure 2.14* is an example of carpenter's sketches

The old timber will by definition be seasoned. If the 'new' timber is a salvaged piece, or a piece of seasoned or kiln-dried timber, there should be no problem. If the new insertion is with green oak, then it will be necessary to take account of the way that it will move as it dries out and shrinks.

Fixing can either be with wooden pegs or with metal fixings. If green oak is used, then the fixings should be of stainless steel, since the tannins in the wood will attack mild steel.

It may seem as if replacing damaged timber with more timber (*Figure 2.15*) is the most straightforward and 'honest' of solutions. However, even when it is technically appropriate to do so, it may not be considered the most appropriate solution in conservation terms. This is because, depending on the nature of the building and the building's history, what conservationists consider to be most important may be the actual fabric of the building – and repairs such as scarf joints actually involve removing quite a lot of the fabric. It may be necessary to remove any damaged timber, or at least to bypass it, for structural reasons. Scarf joints only work if good timber is bonded to other good timber. In order to create the surfaces for a scarf joint, it will therefore be necessary to cut away quite a lot of the sound timber. In conservation terms this may not be considered acceptable and so, against intuition, the best conservation solution may be to strap the joint or in some other way use metal to hold the elements together.



Figure 2.15 New for old
 Photo: Carpenter Oak & Woodland

2.4.2 Timber and metal

Some of the simplest metal repairs may be what Piers Sweetingham of Carpenter Oak and Woodland describes as a 'typical SPAB repair' – using, for instance, a T-shaped piece of metal to fix a post back to a sole plate. These types of repairs are simple and 'honest' in the special dialogue of the conservation community – you can see immediately what has been done.

Some repairs with metal are more sophisticated. They may be done to correct original design errors, or they may be made to buildings that already used some metal elements. At *St Mark's*, Silvertown, when Julian Harrap Architects was rebuilding the roof, a structural analysis showed that there was an inherent weakness in the roof, and pieces of metal were put in to strengthen it (*Figure 2.16*).



Figure 2.16 Concealed stainless steel rods strengthen these trusses at the Porter Tun Room

Photo: Julian Harrap Architects