Knock on wood

Wooden floorboards are enjoying a boom, but how do you work with what your client gives you? Maintaining authenticity without great expense or labour requires a creative use of existing elements. Miriam Cadji reports.

Azman Owens recommends water-based sealant on sanded boards (main picture). Hutton & Rostron alternated old and new oak boards to achieve a stripey effect (below).

Convince your client to rip up their wall-to-wall shag pile carpet to expose their wooden floor, and you may be in for a shock – dealing in the unknown inevitably carries some element of risk.

Understanding what to do with existing floorboards when renovating an interior is less straightforward than specifying a new material that arrives on site perfectly wrapped and ready to install. But then, the enduring popularity of this material is its awkward unevenness. The challenge for architects lies in exploiting this aspect while providing a sound interior.

An obvious way to improve an existing wood floor is to sand and seal it. Joyce Owens, one half of architect Azman Owens, knows all about working with wood floors: 'We've done so many lately – it's really no big deal.' She recommends using the newer, water-based sealants (such as BonaKemi's Pacific 1) as an alternative to traditional, oil-based varnishes.

The newer sealants are transparent, won't yellow over time and, if a matt version is used, give a very natural finish. They also dry much quicker than oil-based varnishes and don't give off any harmful fumes.

But there will be times when sanding and sealing alone isn't enough. Fraser Brown MacKenna used some sneaky cosmetic surgery to overcome the problems discovered in its client's floor (see *RIBAJ*, June, p48). While most of the boards were in good condition, parts were in a state of disrepair. 'We didn't know how it would look until it was exposed,' explains project architect Martin MacKenna.

The firm's solution to the problem proved cost-effective and creative – they 'borrowed' good boards from unseen parts of the floor, and recycled them where possible. For the rest of the space, they bought new timber and aged it to match. 'Basically, it was a very unscientific process – we relied on an understanding contractor to do deliberately 'bad' work,' he says.

The boards were laid loosely to achieve an authentic, uneven effect. The existing floor was sanded to just beyond the join, and then the new floor stained to blend with the old before the entire space was coated in a water-based matt ('it looks more natural') polyurethane varnish, by Valtti Specialist Coatings.

'We can tell, but most people think it's an original floor. It took some effort, but with wear and tear it will blend in more to match a tired-looking floor,' says MacKenna.

As well as considering the creative and technical aspects, knowing how much to charge is notoriously difficult. 'You don't know how much it'll be – until you know,' explains Martin MacKenna, cryptically, 'The area of flooring we relaid was covered in partitions that needed to be demolished. We got the contractor to price it up, then he had to stick to what he said. In the end it came out of the client's contingency. I think the contractor probably put more time and effort in than budgeted because we all wanted it to work.'

Aging solution

Hutton & Rostron, a practice based in Guildford, also mixed old and new timber in its office floor – a worn, mid-19th-century, oak-boarded ballroom, which had suffered badly from dry rot. After repairing the structural damage, many of the boards needed to be replaced. The architect bought some new green oak boards and stacked them flat in a ventilated pile in the ballroom to acclimatise. After six years, they were deemed sufficiently mature, having achieved the same humidity levels as the old oak.

The original wood had darkened over the years, but rather than attempt to disguise the new boards, the practice simply fitted them alternately for a deliberate, striped effect. As the new oak oxidises, the floor will mellow over time, fading the stripes. The use of green wood would not usually be advised, but in a space that is not regularly subjected to central heating, and that has been left to mature slowly, it is acceptable.

The longer timber is left in a controlled environment to attain comparable humidity levels to where it will be laid, the better. Of course, six years is clearly a luxury few can afford, and time can be a problem – materials left on site are often viewed as an imposition for the contractor.

Timothy Hutton, environmental scientist and partner with Hutton & Rostron, explains: 'Naturally ventilated buildings are extremely drying to timber, causing significant shrinkage to occur and irregular gaps to form; in extreme cases, this can tear boards apart. Underfloor heating exaggerates the drying effect further. Parquet and block flooring have more resistance to this.

'It is also important that some movement allowance is designed into the thickness of the floor – I wouldn't recommend using an adhesive in planking floors, because you need greater flexibility.'

The Timber Research & Development Agency (Trada) carries more information on fixing timber floorboards and provides factsheets (£3 each).

The alternative to working with new materials is to salvage old ones. Hutton & Rostron is a strong pioneer for the cause; it was so frustrated at the wastage of material that it set up Architectural Salvage in 1977. Describing itself as a marriage bureau, it introduces people who need to those who have, and charge a £10 search fee per inquiry.

A similar indexing service, Salvo, feels passionately about the waste of materials that could be avoided. They estimate that 21,000 tonnes of reclaimable, reusable wood is destroyed daily in the UK – and argue that architects are complicit in this waste.

Thornton Kay, partner at Salvo, says: 'Architects don't like reclaimed materials because they can be problematic to source and expensive. They are reluctant to make the extra effort unless the client specifically requests it – in our experience, even then, they send their clients to do the legwork for them.'

Another reason many architects are not specifying salvaged material is that they fear litigation, and prefer to