TALKING TIMBER

TAKING CARE

James Berry, *technical manager at the Property Care Association (PCA), looks at the problems which can occur when timber in buildings is exposed to moisture*

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Throughout history, timber has been the most widely used and vital material in building construction. Construction methods and materials are forever evolving but timber, for many reasons, still remains widely used today. However, because of some of its properties (as anyone reading this article should be well aware) it is essential that in-situ timbers in buildings remain dry and maintain their integrity. What happens when they don't?

Many residential constructions, be they modern or old, contain a large volume of timber. Typically floors, stairs, and roofs will all be built from timber. During the lifetime of a property it is not impossible that the timbers may be exposed to excessive moisture. This may enter the fabric of the building for a variety of reasons, for example, rain water penetration, lateral penetration as a result of high ground level, and atmospheric moisture.

When timber is exposed to excessive moisture for prolonged periods the likely result is an attack by one of a number of wood-destroying fungi. Dry rot, Serpula lacrymans, is the most serious form of fungal decay of timber – it has the ability to spread into perfectly dry areas causing extensive damage.

That ability to spread way beyond its origin has also led to serious damage in new buildings – for instance when masonry, containing infected timber, was removed from old buildings and used as the hardcore base for new concrete floors. The damp, wet conditions in the rubble hardcore in the subfloor enables fungi from the timber debris to flourish and causes severe decay and damage to skirting boards and any other timbers before the dampness present during construction has dried out. Wet rot occurs more frequently but is less serious. Decay is typically confined to the area where timber has become and remains wet.

The Property Care Industry deals with the preservation of in-situ timber by primary management of dampness reducing the risk of fungal decay within buildings. Control of moisture includes prevention of rainwater penetration, remedying ground water penetrating and rising dampness, condensation management and structural waterproofing.

The industry also deals with the management of wood destroying insects in buildings. Many, including the Deathwatch Beetle, Xestobium rufovillosum, are closely linked to moisture and timber decay and so managing moisture is paramount in their control. Others, most notably the common furniture beetle, Anobium punctatum, is not as restricted. It naturally inhabits dead stumps and fallen branches in woods and hedgerows, but is also found in building timbers and furniture.

The Property Care Industry is tasked with identifying defects, diagnosing causes and suggesting and/or implementing necessary remedies.

It is chiefly the responsibility of a surveyor in remedial treatments to visit sites to determine defects which have or may have the potential to lead to deterioration of timber within buildings. The surveyor will normally construct an action plan, including risk assessments, and guidance on suitable treatments. They will assess the scale of the issue and recommend the solution that best suits the circumstances.

Some treatments will be curative and solve an existing problem, whereas others will be preventative if the surveyor identifies something which may become a future risk or concern.

Once an issue has been identified and it is established that action is required it would usually be a job for specialist trained technician(s) to undertake any necessary treatments. Not surprisingly, a knowledge of wood science is fundamental to quite a lot of all of that! ■

Below: Dry rot affecting timber