Timber training: who benefits?

Phil O'Leary explains how BM TRADA's courses can help companies apply best practice principles.

Timber training can help individual practitioners or a whole team of employees from the start of a building process right through to completion. BM TRADA develops and delivers courses for clients across and along the whole supply chain. These courses become a necessity for some suppliers; for example, the Visual Strength Grading course is designed to train delegates to strength grade timber, and forms an important part of the process for companies to place structural timber on the market.

Timber properties and uses

In recent years we have been more frequently asked by a broad range of users or suppliers of timber and timber products to deliver courses on timber as a material. These clients range from retailers and timber suppliers to engineers and architects, manufacturers and installers.

Often the first thing we are asked to provide is a course on a list of products and/or an end use. This can be challenging and sometimes limiting. To help with this we set up a course on Timber Properties and Uses, which provides delegates with a broad knowledge of how timber behaves and performs in any application and can be applied to most timber species and timber-based products.

Applying the principles

The following example illustrates and reinforces the importance of concepts that we are trying to convey.

Scots pine at Keldy forest

A builder goes to his local timber merchant with their client, who is decidedly fussy about the quality of the timber they want to source to make bespoke wide planked flooring. A young lad named Steve shows the pair the best quality timber they have in stock and discovers during the conversation that the floorboards are going to be laid over underfloor heating.

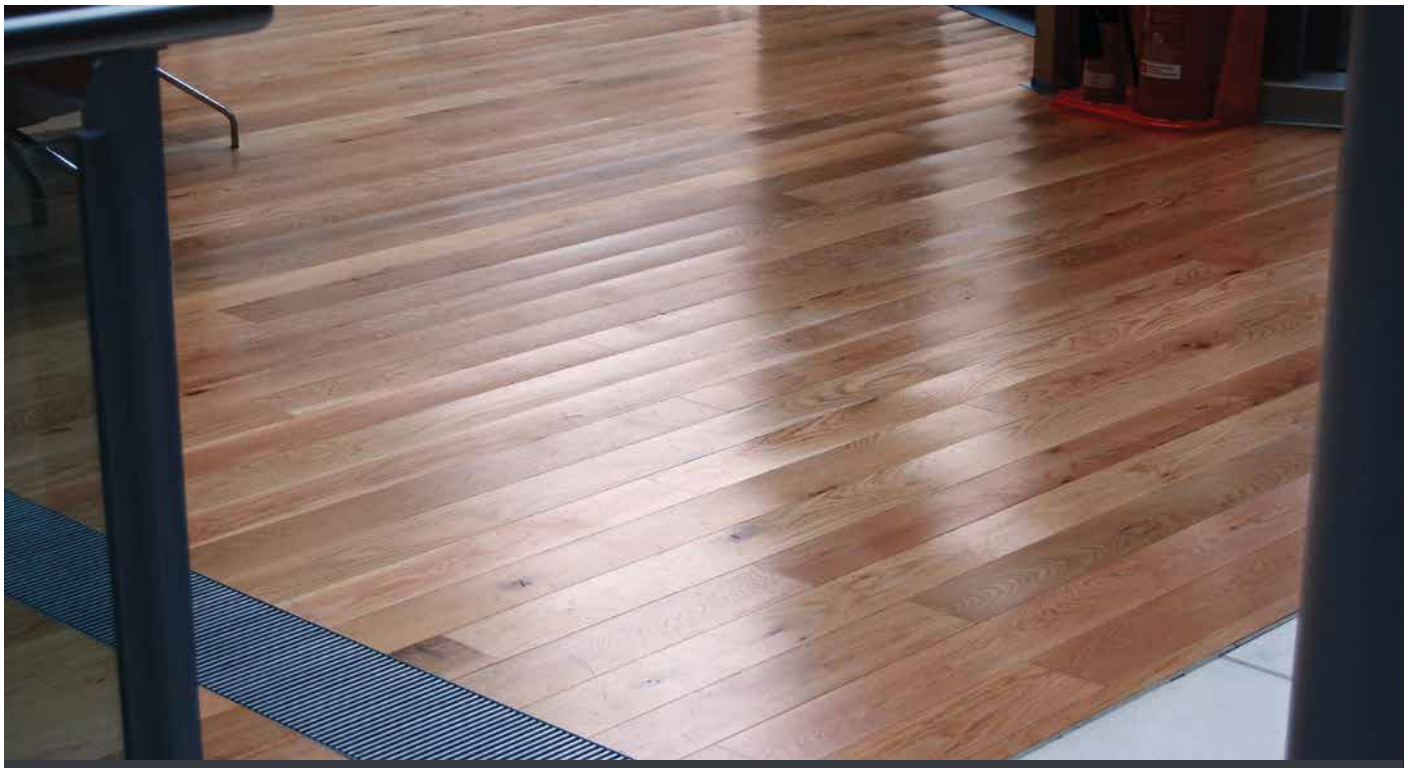
Now Steve has been on one of our training courses and remembers an exercise with various scenarios that we use to show how to work out the expected shrinkage (and expansion) of timber. The aim of the exercise is to show how shockingly large the amount of shrinkage can be in a floor and how to reduce the risk of having large gaps developing between boards. We look at how to determine the moisture content of timber at the start of a given set of conditions (temperature and relative humidity), and work out the subsequent shrinkage after the underfloor heating has been turned on. We then show the difference between large, medium and small movement timbers, and demonstrate how to design and lay the floor to reduce and accommodate the shrinkage.

Steve remembered and knew that wide gaps between adjacent boards is a common complaint from end users. He couldn't (and wasn't expected to) remember any of the figures or numbers from the training exercise. However, he recalled that the moisture content at time of laying was important and that it was prudent to have narrower boards so that there were more gaps to accommodate the shrinkage. That is to say the more gaps you have, the narrower the average gap is between adjacent boards and, therefore, there is significantly less risk of unsightly or unacceptable large gaps appearing.

He managed to convince the builder and their client to select considerably narrower boards to make the bespoke flooring.

So, who gained from this advice? All three parties did. The builder's client had a floor that behaved and functioned as they wanted and expected; the builder wasn't called back to undertake costly repairs or be involved in a dispute; the timber merchant gained a reputation for being knowledgeable and wasn't dragged into a potential dispute regarding the quality of the timber.

The combination of course content and an attentive attendee paid off.



Cupping can occur if timber is not specified and designed correctly

Learning outcomes

Understanding how and when timber shrinks and swells, the difference in the three different planes in timber, the difference between species, fibre saturation point – knowledge of all these factors, and more, can be applied to timbers in most uses, if not all.

What is fibre saturation point and what are the three planes of timber? What are two of the properties that make Western red cedar a better choice for external cladding than oak in regards to their response to changes in moisture content? Well, I'm not going to tell you today, but you can probably find three out of the four answers fairly easily by searching online.

However, do you know what else you need to know? It's difficult to type in search terms when you don't know what you should be researching because you are not aware what questions you should be asking and you don't know what you don't know.

Fundamentals of timber

Following on from our Timber Properties and Uses course (which takes approximately a day to deliver), we have developed an eight-part series (45 minutes each), called Fundamentals of Timber. Part of the challenge is that there is not one logical order to follow, as so many of the principles of and topics relevant to timber are interrelated. But we have devised an order that we think best addresses the key issues.

Delegates who have attended Module 1: 'What you need to consider when using and specifying timber' will have a good understanding of what topics to research. While this first module doesn't go into any details or explain any of the principles, the subsequent seven modules do. This is a huge subject area and although we can't cover everything in this course, the fundamentals are fully explained.

Other courses

BM TRADA offers specific courses on topics such as timber frame, scaffold board grading or Eurocode 5, but the principles in Fundamentals of Timber still apply and give you a good grounding and better understanding of working with timber. ■

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Further information

For more information on BM TRADA timber training courses, visit www.bmtrada.com/training