

Viewpoint

Timber-frame success: the importance of early engagement and collaboration

Andrew Carpenter, of the Structural Timber Association, explains the importance of partnering with experts in the industry, how early engagement is crucial, and how to find the perfect build partner when designing with timber.

The popularity of constructing with timber is continuing to grow, and for good reason. Timber as a building material represents the UK's greatest opportunity to achieve net zero by 2050 due to its carbon-saving benefits. Furthermore, timber is our only truly renewable resource through properly farmed and managed forests with ethical harvesting protocols.

To ensure structural engineers access the right timber-frame skills for their project, Andrew Carpenter sets out the benefits of early engagement and explains how the Structural Timber Association (STA) can help them partner with experienced, accredited industry experts.

Timber systems

The first thing to clarify is the terminology that we use when discussing timber in construction, as sometimes this language can become quite disjointed and misunderstood. There are a number of different structural timber systems which each have their own benefits for differing applications and projects. These can be categorised into lightweight timber and mass timber systems:

→ **Mass timber systems** include cross-laminated timber (CLT) or glued-laminated timber (glulam) and are typically used in complex and high-rise buildings. The use of mass timber for these types of buildings presents a great opportunity for reducing the carbon impact of a building both during construction and throughout the lifetime

of the building. Timber is also known to enhance the living and working environment through its biophilic benefits; therefore, in many mass timber projects, the timber is purposely left visible to offer a tactile and sensory environment (**Figure 1**).

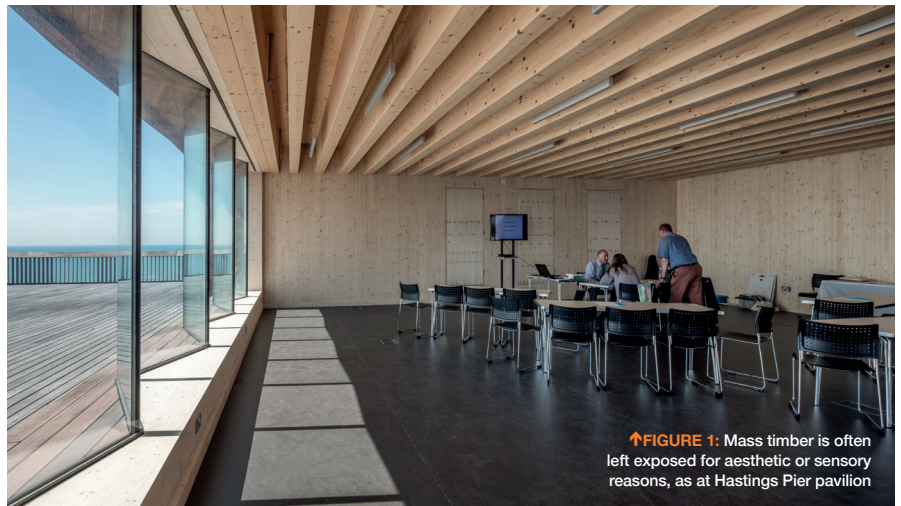
→ **Lightweight timber systems** include timber frame and structural insulated panels (SIPs) and are the preferred systems for low- and medium-rise buildings, such as housing, educational and commercial. These systems have been commonplace for many years,

and account for 23% of the homes built in England, and over 85% in Scotland. Off-site manufactured, these systems ensure a faster build as well as a more energy-efficient and sustainable building (**Figure 2**).

Collaboration and expertise

Early collaboration and partnering with experts throughout the whole supply chain is important. Structural timber detailing requires knowledge and experience to ensure safe and correct design, as with any other construction material and process. The good news is there are plenty of experienced timber-frame experts with a wealth of knowledge and expertise.

With over 850 members, the STA is the UK's leading organisation representing the structural timber sector and associated supply chain companies. All members, including suppliers, designers, engineers, manufacturers, erectors



↑ **FIGURE 1:** Mass timber is often left exposed for aesthetic or sensory reasons, as at Hastings Pier pavilion

and installers are profiled on the STA website.

It is important that quality and standards of timber construction are to the highest degree; therefore, the STA regards accreditation as crucial to providing all stakeholders with evidence that companies are held to high standards.

The STA's quality assurance scheme, STA Assure, provides solid reassurances to the

construction community that members meet or exceed current legislative and regulatory requirements. The robust assessment process ensures that design, production, and site assembly processes and quality controls are in line with customers' expectations for consistent, high levels of quality.

Another vital note is that for members to attain STA Assure accreditation, the installers that they

Find out more

For more information on the STA, STA Assure and to find an STA Member, visit www.structuraltimber.co.uk.

contract with must have successfully completed the STA's Timber Frame Competency Award Scheme (TFCAS), an invigilated test to ensure competency and knowledge.

The importance of making early engagement with contractors, architects and other partners cannot be overstated. In the same way as any other construction system, in order to construct an efficient timber building, material choice should be made at the early stages of design. This material-first approach should be best practice across the industry.

Andrew Carpenter

Andrew Carpenter is Chief Executive of the Structural Timber Association, which aims to drive awareness of the value and benefits structural timber can bring to the construction industry.

FIGURE 2: Lightweight timber systems are usually off-site manufactured and allow rapid assembly on site

