

INTBAU Timber⁰¹

Talk *in review*



30 JANUARY 2020

Be Excited. This was the concluding statement from Jez Ralph, founding director at Timber Strategies who spoke at INTBAU's Timber talks on 27th January. This may have come as a surprise to some audience members, perhaps expecting another rendition of climate emergency, infused with the statistics about the construction industry's overwhelming contribution to rising Co2 levels. Cynics might try to undermine this decisive optimism about the future role that timber has to play, but on a dreary Monday in January, with the uncertainty of Brexit looming on the horizon, it was both refreshing and encouraging.

From the outset, it was clear that the varied panel was matched by a somewhat mixed audience of enthusiasts like myself, architects, carpenters, and representatives from the timber sector. It is safe to say that this concluding optimism was not quite unbridled throughout, as at times, proponents from the conservation, forestry and commercial sectors were pitted against each other. There were certainly a few raised eyebrows when one speaker highlighted the certain benefits of engineered timber, sourced from monocultural plantations 'abroad'. However, it was this contrast and at times, tension, which made the evening so worthwhile. This varied company were able to judge for themselves the compatibility of advancing timber technology with the traditional crafts. Topics such as laser scanning, localised processing, robotic arms, carpentry and timber conservation; in just over an hour.

First to speak was Charley Brentnall, an internationally renowned leader in timber construction and conservation, who's companies Xylotek and Carpenter Oak speak for themselves. Indeed, INTBAU was extremely lucky to have Charley speak in person about projects undertaken by his students at Hooke Park, part of the Architecture Association's woodland campus in Dorset. Here students can experiment, engineer design and build impressive structures like Wood Chip Barn. By using an app on his iPhone, Charley showed how it was possible to 3D scan trees in situ, select only those with the correct angled

forks, and carve joints for an otherworldly ark using a robotic arm. Charley implied that these technological advances needn't represent a disconnect from traditional craft. There is a definite need for more opportunities like this, that educate and retain an in-depth knowledge of timber at the heart of the curriculum for young architects and engineers, and facilitate more cross-disciplinary collaboration on projects like those seen at Hooke Park.

Following Charley was Richard Oxley, an experienced conservation architect, whose practise, Oxley Conservation, is based in the Chiltern Hills. Richard started by emphasising the value of historic timber buildings; their versatility, durability and sustainability. He spoke of timber's innate ability to adapt to accommodate slight changes in humidity and temperature and used dendrochronology and archival records to illustrate that vital skills and attitudes to repair are at a danger of being lost in the 21st century. In the 1400s, locals would travel for miles in the hope of selecting the appropriate timbers for their specific project, wasting very little material in the process, and relying upon a comprehensive knowledge of the material and which parts would fit best in different structural capacities. It was this same point about local knowledge and resources that Jez Ralph picked up upon later in the evening.

**“A timber takeover?
Be excited: the future's
not so bleak.”**

Richard also did well to reiterate the well-known fact that the greenest building is the one which already exists; a phrase used by INTBAU trustee Robert Adam of ADAM architecture. Richard showed some ingenious examples of how repair and conservation could be done with timber derivatives such as Pavatherm insulation and wood fibre insulation in roofs and walls.

Also up for discussion was our obsession with exposed timber in historic building facades. “Let us not greenwash but limewash” Richard argued; limewash being the traditional authentic way of maintaining a timber framed building so that it could withstand the elements. Our tendency to strip back brick and expose timbers is informed by the mock Tudor revival style of the late 19th century, which has manifested itself in half-timbering, masonry veneer techniques that have played their part in realising the mock Tudor suburban dream.

The third speaker was Antiopi Koronaki, who travelled from the Centre of Natural Material Innovation in Cambridge. Contrastingly, Antiopi made a sound case for the obvious aesthetic qualities of timber in medium sized new builds like schools and affordable housing. Referencing numerous studies, she showed how timber structures were proven to lower the heart rate of schoolchildren, increase social interaction and even raise the productivity levels of adults in offices. In essence, being surrounded by a natural material has clear benefits for our mental and psychological well-being. Of course, Antiopi was also advocating that this natural material be engineered. Engineered timber structures do not align themselves overtly with traditional architecture or traditional skills. However, Antiopi and Andrew Carpenter, our last speaker and representative from the Structural Timber Association, showed the de facto place in the market for this material, be it in the building of skyscrapers, or the building of schools and affordable housing.

Prefabricated timber construction is efficient, quick, surprisingly fire-resistant despite the findings of Grenfell, and as she described, sustainable. It uses the minimal amount of medium to low quality timber, and quality and strength is controlled through the process of layering using glulam. There are, of course, limitations. The monocultural plantations this engineered timber relies upon in its ‘uniform’ use ultimately rely upon timber imports from abroad. These plantations are vulnerable to disease and high winds, and the speed at which this industry seems to be going may soon exhaust our supply of timber as forests struggle to keep up with global demands.

Jez Ralph, director at Timber Strategies followed on from Antiopi. With a background in forestry and education, Jez was primed to comment on the changing timber landscape in the UK, advocating the need for further collaboration between foresters and members of the construction industry. Jez brought the talk closer to home and argued that the availability of timber should dictate the design choices of architects and consumers, years in advance. He also highlighted the frightening impact of climate change in the UK, and used a table to emphasise the increasing incompatibility of species like sitka spruce, birch and beech in Dorset forests, which are no longer suited to this particular area. Jez advocated controlled forestry and mixed plantations and argued that we should be moving to a more sustainable form of localised processing.

Overall, it was this question of demand and supply rather than form, style or aesthetics that framed this particular evening. This too might be revealing about where future of timber is heading. It is clear that a rhetoric of carbon sequestration has its flaws and is often too readily adopted. More talks, more discussions and more contemplation is required. Who, how and what will dictate the manner in which we build, and we’d better hurry: the last timber build lasted the time it took to put on this event. However, it is an exciting time. The timber buildings of the future do not have to refer to the previous structural forms using concrete and steel. With more hands-on training, exposure, workshops and collaborative efforts it is possible that we can grow a new cohort of architects and designers that are better in tune with our forests and this particular material.

