The GREEN issue

In this fifth of a series of workshops relating to the modern use of wood veneer, wood industry consultant Michael Buckley explores the issue of the environmental contribution that veneer makes to the conservation of forest resources.

Tulipwood interior of golf club

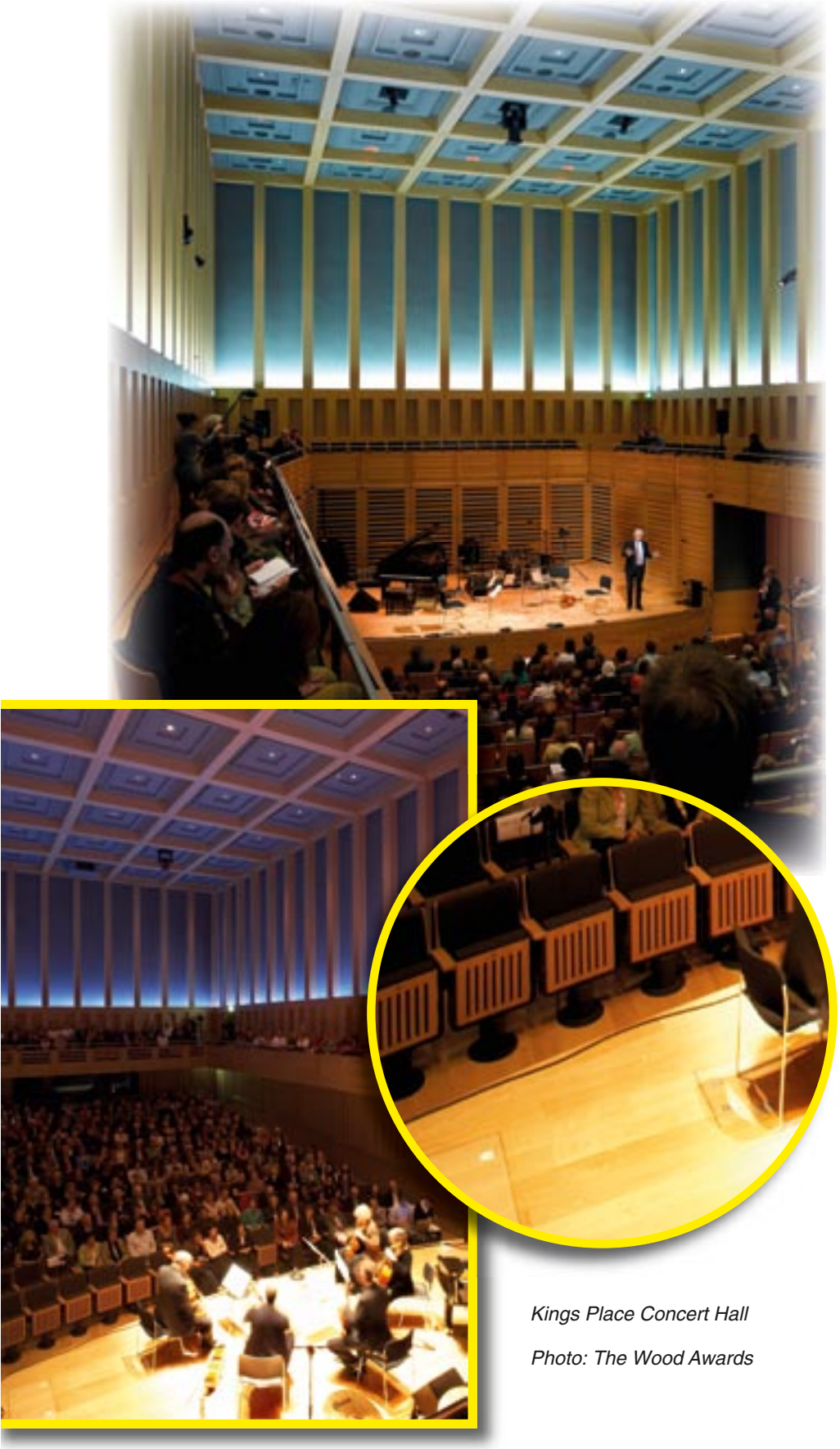
Just as the global supply of energy and even food are major issues today, equally important is the issue of long-term supply of all raw materials, including those for panels and furniture. The preferred species for both products are often highly valued hardwoods, required in high grades that take many decades to replace, even in the most well managed and sustainable forests such as those in North America and Europe. Carefully selected and well processed veneer can make a significant contribution to the extension of forest resources anywhere in the world.

One example of interest was the fit-out of a new golf club in the UK many years ago, using American tulipwood, otherwise known as yellow poplar in the USA. This particular species is far from ove stretched and is in fact one of the most sustainable of all temperate hardwoods. The golf club interior designer specified tulipwood using sapwood and heartwood from as few trees as possible, presumably to maintain colour and grain consistency, but in the event only one tree was needed. The point was made.

Very recently, another fine example has emerged in the British Wood Awards – the premier award for wood in architecture and furniture – in which a whole concert hall, newly constructed in London has been fitted out from one tree. The point has been repeated with great effect.

In the Middle East, an example of innovative use of veneer has recently been the installation of American walnut veneer at the entrance of the expanded Dubai International Airport hotel. In this case, the structure is aluminium but faced with pre-treated wood veneer (supplied by Schorn & Groh), and gives the impression of using an expanse of solid wood by the intelligent use of veneer. Thus, in this case, the use of highly valued wood is extended by technology.

Coming closer to home, the proliferation of shopping malls



Kings Place Concert Hall

Photo: The Wood Awards

Photo: Schorn & Groh

Dubai International Airport hotel

in Asia, and particularly in Singapore, Seoul, and such places as Surabaya, raises this whole question of extending the resource by using veneer. Perhaps it is the ultimate answer to responsible use of wood. When we consider wood as the most eco-friendly raw material available for panels and furniture, it does not give us leave to waste. And if ever there was a wasteful consumer sector, it is shop-fitting, exceeded only by exhibition fitters. I blame not the shop fitters nor the exhibition installers, but their clients. Constant refurbishments and renovations deal a heavy hand on all the materials used. But whereas most materials are just used as they are, wood provides environmental options with veneer topping the list for responsible use. Take a look at the new Ion Orchard, just opened in Singapore. The design and installation is world class, and the materials used in many of the top designer brand outlets obviously spare no cost. But the cost to forest resources of Ion is generally minimal through the use of veneer. Imagine the cost if solid wood had been used throughout. This responsible use may be by design, or not as the case may be, but it is definitely a message for any client concerned with forest sustainability. **PFA**

The Kings Place Concert Hall

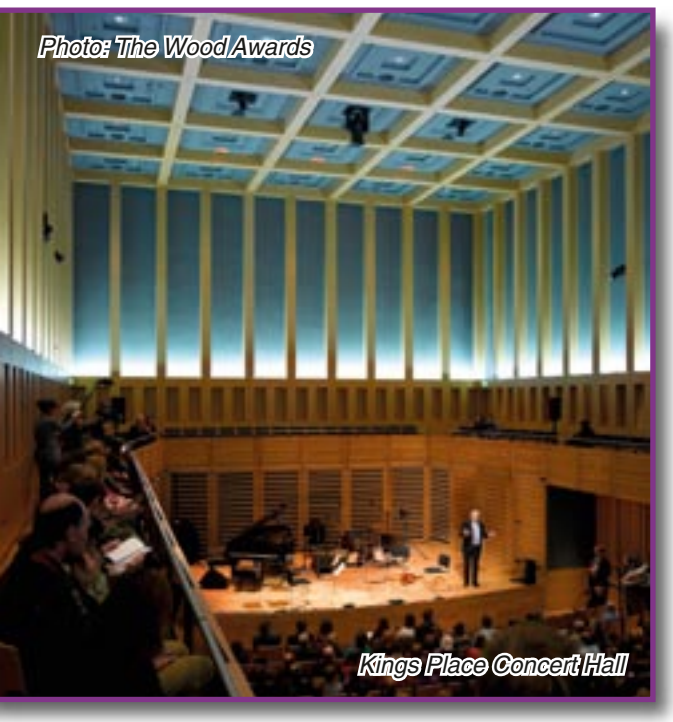


Photo: The Wood Awards

Kings Place Concert Hall

The Kings Place development in London's Kings Cross is a brand new, cultural landmark offering an exciting range of mixed use facilities. There are many significant aspects to this building, but perhaps the most important is the new public concert hall, the first to be built in central London since the completion of the Barbican in 1982. The hall holds 420 people with 300 seats provided in the gently raked stalls and a further 120 seats around the upper gallery. With its elegant interior and state-of-the-art acoustic performance, it is intimate, yet large enough to accommodate a small orchestra, and has regularly been used for live radio broadcasts since its official opening in October 2008. In terms of its construction, it is a building within a building – a box that sits on rubber mounts to give it complete acoustic separation from the rest of the building and the outside world. Structural columns around the hall are set away from the walls to allow curtains to be drawn between the columns and the wall to modify the acoustic for speech or amplified music. This relatively complex design detail allows this adaptation to happen without changing the architectural appearance of the hall.

The architecture of the hall emerged from a close collaboration between Dixon Jones and Arup Acoustics, with every element of the interior having to conform to strict acoustic criteria. Broadly speaking, the regular columns and

coffers at the top of the interior deal with the long sound waves. At the bottom of the space, the timber lining has a complex series of irregular slots that control the shorter frequencies. The result is a concert hall with the flexibility to vary the acoustic to meet the strict demands of classical chamber music, as well as many other kinds of performance, including spoken word.

The hall interior has been lined with European oak veneer, hand selected by the project team from the Spessart region of Germany. This area is renowned for providing some of Europe's finest timber and produces oak with a rich honey colour and consistent grain structure. Amazingly all of the veneer sourced for the hall came from a single 500-year-old oak tree. The tree, named 'Contessa' by its owners, grew in an ancient hunting forest that now belongs to the local community. There is no formal replanting system: the tree is felled and where the acorns have fallen the forest reseeds. The woodsmen were very keen for the veneer to be used for a major architectural project and sold in a single lot.

That one tree yielded over an acre of prime grade veneer. It has been used throughout the concert hall to cover the roof coffers, columns, wall panelling, doors and seat backs, thus providing total colour and grain matching across the project. There was even enough veneer left to face the panelling of a second smaller performance space at Kings Place. **PFA**

About our Columnist

Mr Michael Buckley's expertise is on the uses and market applications of hardwood species and products. With a Masters in the US and EU hardwoods, Mr Buckley is a Fellow of the Institute of Wood Science and commenced his career working in tropical plywood and panelling in Europe and Asia. He is a Liveryman of the Worshipful Company of Carpenters, an ancient craft guild in the City of London. In recent years he has taken a keen interest in designing with timber, working with leading furniture designers and many architects. Now based in Singapore, he continues close ties with furniture and panel industries in the region.