



AHEC Europe
Unit 20.1,
20-22 Vestry St
London, N1 7RE

americanhardwood.org

PRESS RELEASE
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OUT OF THE WOODS: ADVENTURES OF 12 HARDWOOD CHAIRS

The American Hardwood Export Council teams up with the Royal College of Art to merge design with sustainability.

The American Hardwood Export Council has collaborated with product design students at the Royal College of Art in London to produce and exhibit chairs during the London Design Festival.

Under the leadership of tutors Sebastian Wrong (Established & Sons) and Harry Richardson (Committee), the use of wood as a material and its associated Life Cycle impacts have been added to the Design Products programme and the students have been set the challenge of designing a functional chair or seat in an American hardwood of their choice.

The designs have been developed in to working prototypes with the help of Benchmark, internationally renowned for its craftsmanship in wood and long-standing relationship with designer Terence Conran. The students camped out on Terence Conran's lawn by night and descended on Benchmark's workshops by day in early July where the company's highly skilled craftsmen, led by owner Sean Sutcliffe, helped them turn their ideas into reality.

"I was very impressed with the quality of the designs and the students' enthusiasm for their projects," says Sutcliffe. "As experts in woodworking, we saw some very strong pieces come to fruition."

The American Hardwood Export Council (AHEC) is well known in the international design community for its creative promotion of hardwood, having worked with the likes of David Adjaye, Matteo Thun, Sou Fujimoto, Arup and Amanda Levete. But now its attention has turned to the potential stars of the future with a unique and ground-breaking project for students.

Education and research provides a unique element to the project because AHEC is using, for the first time, its ground-breaking Life Cycle Assessment (LCA) research. AHEC has recently announced the publication of the ISO-conformant report on the Life Cycle Assessment (LCA) of rough-sawn kiln-dried hardwood lumber. The report, which has been prepared by sustainability experts PE International after an intensive process of data collection, analysis, and review, is the first stage of AHEC's LCA project. The report covers the environmental life cycle of hardwood lumber from point of harvest in the U.S. through to delivery at the importers yard in major export markets. It provides quantitative data on Global Warming Potential, Acidification Potential, Eutrophication Potential, Photochemical Ozone Creation Potential, and Ozone Depletion Potential. It also provides a qualitative assessment of toxicity, biodiversity, land use and land use change, and water resource impacts. The report includes a sensitivity analysis to show how environmental impacts vary according to key factors such as species, lumber thickness, and transport distance and mode.

Using this data and data collected during the manufacturing process, including time spent on each machine and quantities of material used, each chosen prototype has been environmentally profiled using an 'i-report' system developed for AHEC by PE International. In producing detailed Life Cycle "cradle-to-grave" impact assessments for their designs this project allows the young designers to develop genuine understanding of the real and very direct environmental impact of their decisions when using U.S. hardwoods. According to Sebastian Wrong, the project "offers a pioneering opportunity for students to create designs within the context of a stark reality." His co-tutor Harry Richardson added, "it is not only a case of designing a chair that will survive physically far in to the future, it is also to produce a chair whose design will remain relevant far in to the future."



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David Venables, AHEC's European Director who developed the idea for the project with Sebastian Wrong, says: "The talent amongst these students is astounding. This project has given them the opportunity to work with hardwood and the fact that they can also see and understand the full environmental impact of their design gives this collaboration extra relevance to today's world, whilst setting it apart from other student design projects."

Well Proven Chair

James Shaw and Marjan van Aubel

The Well Proven Chair is an experimental project exploring new sustainable ways of production, utilising timber waste from any well-run factory. Combining timber shavings collected from the workshop floor, bio-resin, water and dye, British born James Shaw and Dutch-born Marjan van Aubel moulded the porridge-like mass to a classic chair which dried to form a hard structure. This unique piece sits on elegant legs of turned ash, contrasting with the liveliness of the seat.

Phyllida

Nicholas Gardner and David Horan

Named after the sculptor Phyllida Barlow, this piece was inspired by one of her works. With the aim of creating a packable bench out of harmonious materials, Irish David Horan and Australian Nicholas Gardner have designed a flat-pack bench made out of a tulipwood board, 1.5mm ply, bungee cord and no screws. The legs fit in to tulipwood base rings, and to a circular groove in the underside of the bench. When the bench is to be carried, the 'legs' unroll to become flat, and the base rings slot in to another set of grooves in the underside of the bench. The whole assembly is held together with cords, which when the bench is assembled join the rings to hooks on the underneath of the flat bench. Tulipwood was chosen for its character and its strength as well as its light weight, so the bench can be carried by one person.

Beeeench

Petter Thörne

Swedish-born Petter Thörne was conscious about making a modest, yet elegant piece of furniture that is economical in its use of materials. His design, Beeeench, is a 3.5 metre beam structure made up of thin strips of American ash. Ash is a very strong and flexible timber; "For me this project has been about pushing the material to the limit," says Thörne. Beeeench has removable legs making it easy to transport.

Snelson

Sam Weller

Sam Weller has always had a keen interest in mechanics and engineering principles. His stool is inspired by Kenneth Snelson's sculptural works that are built around the principle of tensegrity (a concept later defined by Buckminster Fuller), where components of a structure are held together by the continuous tension of binding strings. Weller's design uses string under tension to hold together the elements, which do not even need to touch. The manufacturing process was relatively simple and it would be easy to replace any damaged part, giving the stool greater longevity. Weller made three stools in American ash, cherry and walnut.

Floating Chair

Bobby Petersen and Tom Gottelier

Bobby Petersen and Tom Gottelier wanted to create an experience, not just a seat. Fascinated with the longevity and solidness of boat construction, they decided to design a floating chair. The boat has been built in marine ply and veneered in American cherry, which was chosen both for its high strength-to-weight ratio and for its colour, which will darken in sunlight. The keel is in American white oak, which is both durable and heavy — a desirable property for a keel. In an unusual twist, the boat can be controlled by a smart phone working with GPS, and the software will drive the propulsion system allowing you to sit back and relax while the boat takes you for a ride.



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Solitude

Mary Argyrou

Solitude by Mary Argyrou is inspired by the traditionally crafted church chairs found in her home country of Cyprus. Staying true to the values of the church, the chair is modest in its expression and its form engages with the longevity and significance of furniture within a church setting. Made in cherry, it has solid sides with a hinge fold-down seat between them. With the seat down, the user can step back entirely into their own private space. Church furniture can easily last for over a century and there is no reason why this chair should not do the same. "Its life cycle is conveyed both by the enduring qualities of the material and its usage," says Argyrou

Squeeze

Nic Wallenberg

London-born Nic Wallenberg has created a stackable chair with ergonomic curves. In order to make the chair as sustainable as possible Wallenberg has taken advantage of the strength and flexibility of American hickory and, with the use of bolts, he has squeezed the chair into its desired shape. The chair thereby gains ergonomic curves without the use of energy-consuming techniques such as steam bending or press molding.

Tree Furniture

Anton Alvarez

This unusual bench is designed by Swedish-Chilean Anton Alvarez. The concept for Tree Furniture is that it should be carved simply from a tree cut down and left on the forest floor where it has been cut – an idea that had to be adapted slightly since he was working with American hardwood in England. By means of a portable sawmill and simple hand tools, an American cherry log has been made into a bench. Alvarez' idea is that it would be a pleasure to happen on such a bench during a walk through the woods.

Num. 4

Santi Guerrero Font

Num. 4 Chair reflects Santi Guerrero Font's interest in the Danish style which typically showcases construction techniques. His chair is visually very simple and honest; you can see where the legs pass through the structure, and where their ends become flush with the seat. By choosing American ash, one of the strongest timbers, Guerrero Font managed to slim the thickness of the timber required from 20mm to 12mm. The Spanish born designer made a jig to create the joints so it would be relatively straightforward to make multiple chairs.

Leftovers Chair

Lauren Davies

Davies' interest in food and cooking led her to designing a chair that could be described in the form of a recipe, made up from a variety of hardwoods with a strong affiliation to food. Many American hardwood species are fruit or nut-bearing, oak, alder and hickory are often used for smoking, maple syrup is extracted from the maple tree and so on. The seat is a traditional Windsor Chair with a twist: the seat is 'pickled' with vinegar, the legs are 'smoked' and the spindles of the back are 'flavoured' with fruit essences. Davies' chair is made up of red oak, alder, hard maple, white oak, walnut, black cherry, soft maple, hickory and pecan. The flavourings, which supply colour, include saffron, paprika, blueberry, strawberry, raspberry, beetroot, blackberry, pomegranate and onion skins.

Designed Legacy

Michael Warren

Upon the realisation that one-inch thick, kiln-dried timber requires much less energy to produce than thicker stock, Michael Warren set out to design furniture using a single piece of timber measuring 25 by 145mm by 1.6m long. Warren designed small-scale connections drawing on joints used in green timber frame buildings. Stemming from a great desire to minimise environmental footprint, Warren avoided steam bending to create the curve of his



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seat, instead using two laminations glued together. The finished stool weighs only 1.5kg. Warren made several stools during his week at Benchmark, his favourite being sapgum, a very lightweight timber, resulting in a featherweight version of his already light stool.

Folded Chair

Norie Matsumoto

Japanese designer and furniture-maker Norie Matsumoto wanted her design to be a beautiful timber sculpture that could also work as a chair, rather than the reverse approach which is more common. This led to an asymmetric design which unfolds in a surprising but elegant manner. Folded Chair combines American ash and walnut, playing with the light and dark tones and making a point at its asymmetric nature. The fact that it can be folded away when not in use makes it more versatile, helping to guarantee its longevity.

Royal College of Art: Pioneering Design and Art 1837 - 2012

Celebrating its 175th anniversary this year, the Royal College of Art is the world's most influential postgraduate university of art and design. The RCA specialises in teaching and research, and offers the degrees of MA, MPhil and PhD across the disciplines of fine art, applied art, design, communications and humanities. There are over 1,100 masters and doctoral students and more than a hundred professionals interacting with them, including scholars, leading art and design practitioners, along with specialists, advisors and distinguished visitors.

www.rca.ac.uk

The Design Products Master's programme, led by Professor Tord Boontje, has a strong culture of experimentation. The two-year course is arranged in small study groups known as 'platforms', each run by two tutors who define the content and focus for project-based design work. Out of the Woods also includes collaboration with the RCA's Visual Communication programme.

www.designprodcuts.rca.ac.uk

ABOUT AHEC

The American Hardwood Export Council (AHEC) is the leading international trade association for the US hardwood industry, representing the committed exporters among US hardwood companies and all the major US hardwood production trade associations. AHEC concentrates its efforts on providing architects, designers and end-users with technical information on the range of species, products and sources of supply.

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Out of the Woods will be exhibited at the V&A during the London Design Festival, 14-23 September 2012.

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