WOODfocus

The magazine of the Institute of Wood Science

Issue No. 17 Autumn 2007

Edinburgh hosts IWSc Annual Conference

Edinburgh castle was the venue for this years Annual Conference held on 22nd November, 2007 with the theme being "The future begins with Wood Science – Innovation into Application". Some seventy-seven attendees updated their knowledge on a wide range of relevant subjects all geared towards impacting end use applications of timber products.

The previous night saw the pre-dinner drinks take the form of a whisky tasting evening which certainly relaxed everyone before sitting down to dinner and an address from Neil Donaldson, President of the Timber Trade Federation and head of the Scottish Timber Trade Association. Neil expressed his view that wood is the solution to many demands increasingly being made by the construction industry.

He went on to explain that there is a huge change in the timber industry whereby innovation of new timber products is continuing to add value while the requirements for carbon neutral homes can be met by a variety of wood based solutions.

The conference opened with John Moore, Senior Research Fellow and leader of Strategic Integrated Research in Timber Projects at Napier University. He spoke about his work on matching wood properties in the tree to the most appropriate end use applications. This theme was continued by Dr Steve Lee who explained how wood science and genetics were helping make Sitka spruce more closely fit the modern end use requirements of the construction industry. Andrew Lyon from the centre for Timber Engineering at Napier University brought these two papers together with an overview of the acoustic testing of plantation Sitka spruce whereby, the measurement of acoustic resonance within a tree indicated the varying density of the wood. This was akin to the modern sonar systems used by the navy to detect submarines.

The second session concerned innovation in panel products and the opportunities afforded to the panel industry. Geoff Rhodes of Coillte Panel Products highlighted where the panel industry was utilizing wood fibre not suitable for use as solid lumber and mixing it with recycled fibre and modern adhesives to make high tech structural material. This subject was developed further by Dr Martin Ohlmeyer from the University of Hamburg talking about the release of volatile organic compounds from building materials and the fact that new European Standards are currently being developed to limit their affects on indoor air quality.

Left to right: Peter Condon, Dr Ed Suttie, Dr Martin Ohlmeyer & Geoff Rhodes

Dr Ed Suttie (BRE) spoke about the need for wood products to match service life expectations with durability being fundamental to the sustainable chain. Examples of effective planned maintenance and life extending design concepts were highlighted in his delivery.

The day was rounded off by Peter Condon, Director of e-learning at the Centre for Timber Engineering, with a thought provoking presentation on timber education, ways of learning and knowledge resources. "Training should be reviewed as an investment and not a cost" he stated before going on to say that education providers need to make knowledge commercially relevant and accessible. He illustrated this with examples of how this can be achieved.

Geoff Taylor, President of the Institute, rounded off the day by stressing the need for greater co-ordination within the timber industry and reminded delegates that next years conference will be held at Bath University.

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Notes from your new Director

IWSc and the future

Greeting to you all. Having been a member of the IWSc since 1974, I now find myself in the honourable position of being elected its new Director. The immediate future is going to be challenging as I want to move the Institute closer to the business world, which will provide that relevance for its members and the companies for which they work

The importance of a professional membership body that provides educational qualifications and accreditation of suitable courses in timber education is more relevant today than ever before. The modern wood products market is highly innovative. Take for instance the variety of engineered wood products, the speed with which they are coming to market and being taken up by our major customer, the construction industry. Suddenly one realizes that the timber industry of today is highly complex and is very different from that of 10 years ago or to be precise, a lot further back, when most of us started out in the business.

If the products we sell are innovative, then we who sell or use them must be equally innovative in our marketing approach. Developing the skills of our existing workforce is hugely important given that more than 70% of the estimated workforce in 2020 is already in the workforce today. Yet the education and skills system has until now been focused on young people. But, the development of individuals is the same no matter whether we are dealing with the highest levels of leadership or at supervisory, technical and craft levels or at basic skills.

Although the fundamental aspects of timber have not changed, the methods by which we gain our knowledge have. We who provide training have learned to accommodate a changing society where the balancing of our busy work schedules with family commitments, especially when it takes both parents income to pay the mortgage etc., leaves little time for traditional learning methods.

Today, the IWSc is offering a solution to the product knowledge skills gap, having developed its "Learn While You Work" approach. This offers a range of learning options, from on-line to short tutorial courses, which provide a variety of levels of educational grade, with a selection of relevant subjects enabling companies and individuals to match their product knowledge to their own particular business area.

For the future the Institute aims to be part of your forward thinking business by updating the relevant skills and product knowledge of the workforce. We hope that this copy of WoodFocus will contribute towards this aim by providing interesting features about modern timber products.

Duncan King

Wood Awards 2007

TheWoodAwards

Britain's premier award scheme for wood in buildings and furniture presented their awards at the Carpenters' Hall in London on the evening of 17th October 2007. Formby Pool in Lancashire scooped the Commercial & Public Access category before being crowned 2007's overall "Gold" winner.

A public swimming pool in the heart of Lancashire was deemed a "truly modernist" building by the awards' independent judging panel.

The building, with its distinctive slanting roof, clean straight lines and functional appeal would not look out of place amongst Le Corbusier's great works. The disciplined form of the building was architect Feilden Clegg Bradley's vision from the start. Modernist throughout, without fuss or grand gestures, Formby Pool is one of those rare buildings which has a clear and logical design.

Feilden Clegg Bradley's residential development, Accordia, was also highly commended in the Private category. The winner was SCDLP's "magical" Dairy House in Somerset using a unique combination of glass and oak. Highly Commended in the Commercial & Public Access category was the National Trust's Longshaw Discovery Centre in Sheffield.

The winning projects in the Conservation / Restoration category once again demonstrated the workmanship and dedication required for this specialist craft. The skilful restoration of Abbey Barn - a 15th Century barn in Abbotsbury by Philip Hughes Associates - was highly praised by Wood Awards judge, Alan Johnson of English Heritage said of this project: "The work undertaken is admirable and the life of the barn has now been extended indefinitely". Highly commended was the meticulous conservation of a medieval Doomboard in St Andrew's Church in Dauntsey.

The Furniture category, with which the sponsors intend to recognise the full range of projects demonstrating excellence in wood, had a second successful year. Designer / Maker Andrew Trotman triumphed with his "site specific furniture" which blends effortlessly into its rural environment at Jerwood Sculpture Park in Ragley. Andrew was closely followed by much applauded young designer Jason Heap whose innovative approach to his American black walnut "Infinity + 1" coffee table was judged Highly Commended.

Gordon Cowley's "elegantly detailed and spatially innovative" Marlowe Academy Roof, designed by Building Design Partnership and using Kerto-LVL so impressed the judges it won the Structural category.

The judges made several discretionary awards this year. An Offsite Manufactured Project award went to the team behind Carmarthen Place in London for a "highly successful pre-fabrication method". The winner of the Small Project and Innovation awards was Associated Architects' King's School library. Their free standing adjustable bookshelves built entirely from Finnish birch were highly praised by the judges.

The Awards, hosted by Hugh Pearman of RIBA Journal and the Sunday Times were presented in front of an invited audience of over 200 architectural, design, and wood professionals. Now in its fifth year, The Wood Awards aim to recognise, encourage and promote outstanding design and craftsmanship in wood, the only sustainable building material.

The Wood Awards is supported by twenty generic sponsors, led by the American Hardwood Export Council, the Carpenters' Company, the Forestry Commission and wood for good. ▶

Gold Award & Commercial Access Winner

Formby Pool, Lancashire

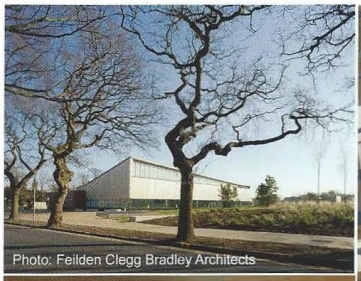


Photo: Feilden Clegg Bradley Architects

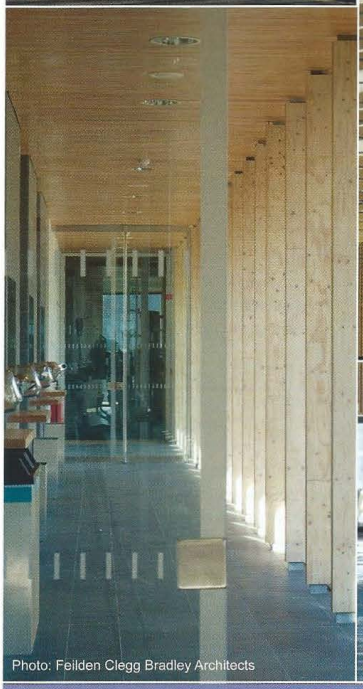


Photo: Feilden Clegg Bradley Architects

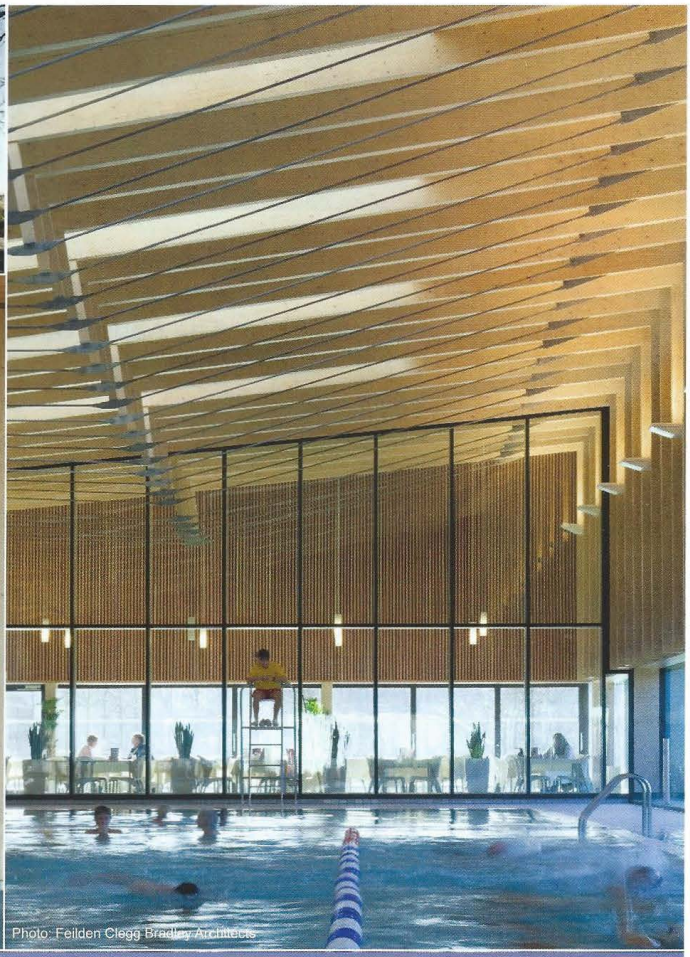


Photo: Feilden Clegg Bradley Architects

Main Species used:- Canadian Douglas fir, English oak, LVL (Kerto) from Finland manufactured by Finnforest

Joiner:- J D M Contractors Ltd

Feilden Clegg Bradley Architects designed a new public swimming pool and park in the centre of Formby containing a 25m 5 lane pool, learner pool, fitness suite and café.

This timber framed building is clad in English Oak and copper which will gradually weather and mature with the park that surrounds it. Internally the structure and cladding is from certified sustainable sources.

The client's brief was for a sustainable, beautifully crafted building which would be a community facility in the widest sense providing facilities for non-swimmers and swimmers alike including exhibition space, a meeting room, café and gardens.

The building takes the form of two linked volumes. The dominant form contains the primary functions of the building, the pools and the café. The roof geometry gradually changes along the length of the building creating a significant presence on the High Street. The lower contains the servant spaces and circulation.

Sustainability was a key driver for client and architect alike. The aim was to create a building which demonstrates the remarkable versatility and strength of timber as a structure and as cladding material.

The building is therefore primarily timber framed with internal block-work and concreted walls providing some structural bracing. The pool hall and café are dramatic public spaces: A 'ploughshare' copper roof rises towards the deep end supported by LVL bowstring trusses. Those trusses are propped off a concealed timber Pratt Truss 50m long and supported at 10.8m intervals on single timber and steel composite columns. The low side of the roof rests on the plywood diaphragm deck of the low building. The deck is supported on engineered timber I-beams which cantilever 2m beyond the glazed east elevation to create an entrance canopy.

The overall effect is of a simple, spectacular timber structure almost floating on slender timber columns reaching out into the surrounding park and allowing the café to spill out into a terrace. ▶

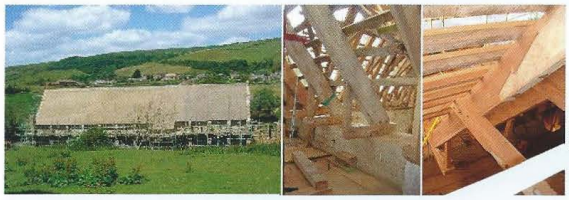
Wood Awards 2007 Category Winners

Structural Winner - Marlowe Academy, Ramsgate

Photos: David Barbour/BDP/ Gordon Cowley

Wood Species used:- Kerto LVL /Spruce
Joiner:- Cowley Timber Works

Conservation/Restoration Winner - The Abbey Barn, Abbotsbury, Dorset



Photos: Philip Hughes Associates

Wood Species used:- English oak, English Elm
Joinery:- J Layzell & Sons Ltd
Wood Supplier:- Ilchester Estates

Private Winner - Dairy House, Somerset

Photos: James Morris

Wood Species used:- English oak
Joiner:- Longpre Furniture Ltd
Wood Supplier:- Hadspen Estate

Furniture Winner - Jerwood Sculpture Park Seating, Warwickshire

Photos: Timberwright Ltd

Main Wood Species used:- English oak, Sweet chestnut
Maker:- Andrew Trotman
Wood Supplier:- Ragley Sawmill (oak)

Tests show increased fire risk if plastic pallets rather than wood pallets are used

timcon

In 2000, comparative fire tests were carried out between High Density Polyethylene (HDPE) pallets – specifically the type to hold oil drums – and standard 2-way entry wooden pallets. The tests highlighted a potentially significant fire risk that had, until then, gone unnoticed in many buildings – plastic storage pallets had shown themselves to present a severe fire challenge even where the goods stored on them are completely inert. Three levels of empty steel drums were stored on four pallets (one pallet on the top) and were ignited by a small amount of fuel. Once the fuel had burnt out the wooden pallets failed to sustain the fire but after seven and a half minutes the entire stack of plastic pallets were involved and the stack collapsed.

The tests, sponsored by the Association of British Insurers (ABI) and carried out by the Loss Prevention Council/ Building Research Establishment (1), were very similar in their outcome to the results of a destructive burn undertaken a year earlier in the USA, by the Arson Bureau of the New York State Office. The objective there was to test the relative flammability of ordinary wood pallets compared with plastic pallets.

During the test in New York(2), four stacked wooden pallets were ignited from underneath by a newspaper filled cardboard box – the stack reached the free burn stage and the box eventually burned itself out. The same test, involving four stacked plastic pallets, saw them reach the free burning stage in four minutes and the pallets burned quicker and hotter than the wooden pallets.

These early tests, literally and figuratively you might say, set alarm bells ringing among insurers and insured alike and just two years ago the Health and Safety Executive also decided to look into the matter, through the Health and Safety Laboratory at Buxton in Derbyshire. The HSL is Britain's leading industrial health and safety facility with over thirty years of research experience across all sectors. It operates as an agency of the HSE, employing around 350 people including scientists, engineers, psychologists, social scientists, health professionals and technical specialists and supports the HSE's mission to protect peoples health and safety by ensuring risks in the changing workplace are properly controlled.

Their objective on this occasion was to determine whether the use of plastic rather than timber pallets, increased the risk of fire, particularly in premises storing large amounts of incombustible but potentially dispersible toxic materials, such as heavy metal compounds.

Comparative tests (3) were undertaken using eight empty steel drums stacked on two pallets and forty-eight drums on twelve pallets in three layers. The pallets types used were heavy-weight timber pallets (22 -27.5 kg) designed for drum storage and shipment and medium load, closed top recycled polyethylene pallets (28 kg). Two ignition sources were used, standard No. 7 wood cribs, or a steel baking tray measuring 303 x 360 mm and containing approximately one litre of heptane – the latter being used for the 48 drum pallet test. In all tests the ignition source was placed at the base of the stack, adjacent to one of the supporting ribs.

Main findings:

- The time taken for the fire to spread upwards to the pallet above the ignited pallet was around 18 minutes for plastic pallets and nearly 50 minutes for timber pallets

- Large fires involving plastic produce copious quantities of black smoke. This is likely to be more toxic than smoke from a fire involving wood and make escape and fire fighting very difficult

- The plastic pallets were easily ignited by a match

- Timber pallets required a far more energetic source, in this case a litre of solvent

- Flames involving timber pallets were almost entirely confined to the height of the stack and were seldom greater than one metre high. Those from the plastic alternative far exceeded the stack height and reached a maximum height of six to seven metres

- Violent spalling of the underlying concrete was observed in larger stack tests on plastic pallets. This is likely to increase the efficiency of dispersal of powered materials stored in containers that are likely to split when falling from racks

- A serious fire could develop in a stock of incombustible but potentially dispersible toxic materials stored on plastic pallets. The rates of burning and associated convective up flows are sufficient to drive significant plume seeding

As a result of the most recent tests, the HSL recommendations are that although only one type of plastic pallet was used, it demonstrated that there is a considerable increase in fire hazard compared to timber pallets. In view of the wide range of types of plastic pallet – lightweight, steel reinforced, molded to retain liquid spills for example – it is recommended that further work be undertaken to determine how widespread the problem is. Also, the use of large numbers of plastic pallets in stores containing incombustible but potentially dispersible toxic materials, such as heavy metal compounds, should be controlled and if possible eliminated.

Notes:-

(1) BRE/Plastic Fire Test Demonstration - 20.11.04

(2) Relative Flammability of Wood versus Plastic Pallets – The Arson Bureau of the NYS Office of Fire prevention and Control 21.12.99

(3) Comparison of the fire hazards presented by plastic and timber pallets HSL 2004/14.

This official press release was issued by TIMCON in October 2007and is reproduced here by their kind permission. www.timcon.org

Blast from the Past - the Great Storm of 1987

In the early hours of 16th October 1987, the Southern Counties were hit by the worst storm in England's history since 1703 with wind speeds of 100 mph. Tragically, 19 people lost their lives. Some 15 million trees were blown down – 12 million of these were within forests and 3 million were individual trees in parks, gardens, and along the roadsides. Damage to buildings, cars and the infrastructure was extensive.

The clear up

Much of the worst damage occurred to conifer plantations that did not have the root system to withstand the extreme winds. With much of the timber being pine the race was on to recover the wood before it was damaged by beetles and fungi making it unsalable. In Suffolk alone, where most of the timber was pine, 475,000 m3 required clearing – equivalent to 13 years wood supply.

One hundred and eighty men worked every day for 18 months on clearing. Almost all the timber was cut manually with chain saws and removed by forwarders fitted with hydraulic cranes for loading and unloading. This scenario was repeated all around the south eastern region and it is estimated that 175,000 lorries were loaded up with timber.

What to do with the timber?

One of the key challenges was what to do with all the timber from the windblown trees. It is estimated there were nearly 4 million cubic metres of windblown timber resulting from the storm.

Species	Volume (1,000 m3)
Softwood	1,900
Hardwood	2,030
Total	3,930

To flood the market with such a volume of sawn timber would negatively affect prices. Also, there was insufficient production capacity at the domestic saw mills to handle such a quantity. Holding such stocks would damage the quality besides the problem of where to store it.

Wet storage

To overcome these problems, a massive wet storage facility was set up at Thetford, Norfolk. A disused gravel pit became home to 70,000m3 of pine logs stored between March 1988 and July 1992. The whole stock was kept saturated by a water sprinkler system – the first time this technology had been used in the UK. Although such a system had been successful abroad, questions remained as to whether it could be successfully used in Britain. As it turned out, the process proved a great success. The financial return on these logs would otherwise have been very different with much of it being un-saleable.

Woodland regeneration

Studies during the last 20 years have observed the natural regeneration of the woodland affected. In broadleaved woodland sites regeneration had, in most cases, been successful, but the tree species present has changed. Ash remained abundant at sites where it had previously been the dominant species, but birch had become the dominant species where oak and beech had originally been abundant. Results from surveys carried out on conifer plantations are currently being evaluated to assess how they can be best used for the restoration of previous plantation sites.

Today

Despite this catastrophe, since 1988, just fewer than 6 million saplings have been planted in the UK and tree cover is now more extensive than at any time in the last 150 years. Today it stands at 11.7%, more than double what it was a century ago, and over 2% more than the figure for 1987.

Despite the Forestry Commission planting 416 million conifer trees in the past 20 years on top of those replacing harvested timber, the planting of broadleaved trees is now progressing at a far greater rate than at any time in our history. Over 26 million hardwood trees have been planted in the past two decades by all interested agencies.

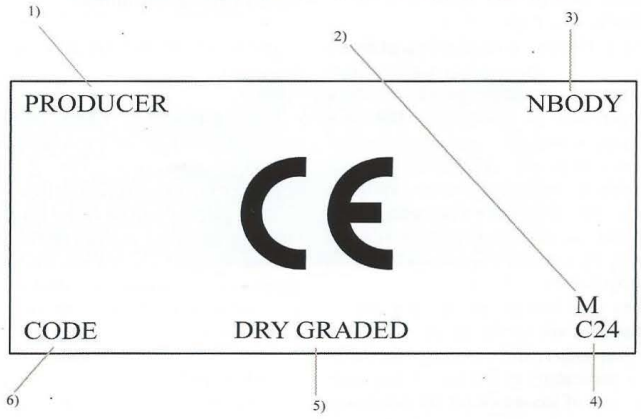
The ecological opportunity was grasped to turn a major calamity into successful long term regeneration programme.

Correction

In last issue of Wood Focus, Spring 2007, Jim Coulson's article on "Strength Grading: Plus Ca Change …", included an example of a possible sawn timber grading mark which, unfortunately did not print correctly. We are happy to reproduce the correct version of this mark here:-

1) Producer identification (Company Name and/or Reference No.)
2) Letter "M" if Machine Graded
3) Identification number of Notified Body (or logo if preferred)
4) Strength Class or grade and grading rules
5) Reference to Moisture Content if graded at 20% or below
6) Code number to identify documentation, which refers to all necessary information required to accompany the parcel of graded timber - as stated in the Producers FPC

EXAMPLE OF POSSIBLE MARK THAT CAN APPEAR ON TIMBER PRODUCED IN ACCORDANCE WITH BS EN 14081: 2005



What is dendrochronology?

Richard Harris, Director of the Weald and Downland Open Air Museum explains

Dendrochronology is a long word for a simple process — dating historic wooden objects by dating the trees from which they were created, using the patterns of growth revealed by tree rings. Tree rings vary in width as a result of varying climate — wider rings in more favourable growing conditions — and these variations are shared, to a greater or lesser extent, by trees in local, regional and even national areas. Starting with living trees and working backwards, dendrochronologists have combined many overlapping sequences to develop "master curves" of growth patterns covering thousands of years, the earlier periods being the result of the analysis of bog oaks and archaeological material. To date a particular sample, the tree ring widths are measured and the sequence is compared to a master curve, moving it along year by year until a good match is found between the two patterns. If the match is close enough, we can be confident that it pinpoints the period during which the tree was growing.

However, that is not quite enough — we need to know the date of the last year the tree was growing. That is generally the year it was felled, which is usually assumed to give the date when the building was constructed, as there is substantial evidence that in the great majority of cases trees were felled for specific projects and used immediately. But the problem is that in many cases the outer rings of the tree are missing, either because they were hewn off originally or because they have decayed. Luckily the last few rings of an oak tree are sapwood, which is visually distinct from the heartwood, so if the sample retains at least some sapwood it is possible to estimate the minimum and maximum number of rings that are missing, and thereby a date range during which the tree must have been felled. Extensive studies have been made of the number of sapwood rings present in trees, and the range is often taken as 10-55 years: so if a sample has only one sapwood ring present, and that was laid down in 1601, the felling date range would be estimated as 1610-1655.

But to do analysis the dendrochronologist needs samples from which to measure the ring widths, and these have to be cross sections of the tree — you can't measure ring widths from the outside surface. Occasionally it is possible to use actual slices, for instance if part of a timber has been removed for repair, but in most cases we have to obtain cores. These are produced using a coring tool, essentially a tube with one end cut into a saw-tooth pattern. The only damage to the timber is that coring leaves a small hole, about half an inch in diameter. The person doing the coring has to be able to "read" the tree from the outside, and aim as accurately as possible from the outside of the tree to its heart, taking care to preserve any sapwood present. It isn't easy — but luckily, in Roger Champion the Museum has an expert! The cores are then mounted, sanded and polished to reveal the detail of the rings, and sent to the dendrochronologist. We are lucky in that department also. Ian Tyers is one of the country's leading dendrochronologists, and has analysed samples for us for many years. When we first met him he worked for MoLAS — the Museum of London Archaeology Service — where he analysed timbers from excavations. He then moved to the dendrochronology laboratory at Sheffield University, and now has become an independent consultant.

Recent results

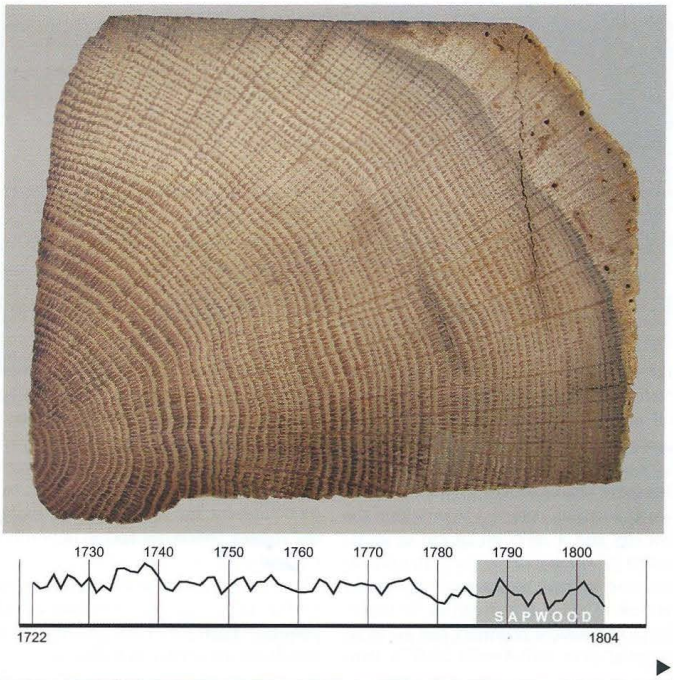
Over the last year Roger Champion has been able to devote some time to obtaining dendrochronology samples from exhibit buildings at the Museum, and we have several exciting new results to report!

- Upper hall from Crawley, Sussex

As we reported in the spring magazine, fifteen samples were analysed and cross matched. The resulting sequence has 124 rings and matches several regional master chronologies extremely well. A few of the samples have sapwood rings, and the felling date is in the period 1494-1513.

- Hall from Boarhunt, Hampshire

This result was also reported in the spring magazine. Eight timbers were sampled. Four of them have been analysed, and these have been shown to be matched pairs, in each case two timbers being taken from a single tree: they are the two



internal tie beams, and the two corners posts at the east end of the building. The tie beams yielded a sequence with only 66 rings and could not be successfully dated. However, the corner posts have 102 rings, and end at the sapwood boundary, so a full sapwood allowance has to be added. The result is that the felling date would have been in the period 1355-1390.

- Barn from Hambrook, Sussex

Twenty cores were taken and thirteen were measured, all of which cross-correlated to produce a sequence of 79 rings. A good match was obtained with master curves, and several of the samples have enough sapwood to show that the trees were felled in 1756 or perhaps a year or two later. The date of the barn has always previously been quoted as 1771, based on an inscription found on the top surface of a rafter in the middle of the front roof slope, underneath a thatch batten that appeared to be the only one ever fixed there! So there is a fifteen or sixteen year gap between the date of felling of the timbers and the date of the inscription, and there can only be two possible explanations: either the inscription was added later, or the trees were kept for that length of time before being used. Either is possible, but the former is more likely.

- Hay barn from Ockley, Surrey

This building is not yet re-erected, but is already dated! A sample taken from one of the four main plates gave an extremely strong match with the master curves, and has its complete sapwood, giving a felling date of 1804.

- Treadwheel from Catherington, Hampshire

The building (not the wheel) was sampled, and six of the ten samples cross matched to give a sequence ending at 1668. With allowances for sapwood, the felling date for the timbers is estimated at 1670-93, so our guidebook description will have to be amended from early to late 17th century.

Other Museum exhibit buildings with dates from dendrochronology:

- Longport farmhouse from Newington, Kent

Four of the phases of construction and alteration were sampled and analysed, producing dates or date ranges as follows:

- Cross wing 1553/4
- Hall range (original date) 1506-1545
- Hall range (re-built) 1603-1648
- Hall range rebuilding of roof 1757-1775

- 'Bayleaf' farmhouse from Chiddingstone, Kent

Bayleaf was built in two phases. The timbers in the earlier phase, consisting of the hall and service end, were felled between 1405 and 1430. Despite extensive sampling, we have so far failed to obtain a date for the later phase.

- Barn from Cowfold, Sussex

Samples were taken from the original wall plates, showing that they were felled in the winter of 1535-6.

- 'Winkhurst' Tudor kitchen from Sundridge, Kent

Only one sample produced a date range for felling, 1492-1528. This accords well with our stylistic interpretation of the building.

- 'Pendean' farmhouse from Midhurst, Sussex

During the work that was carried out in 2002, 45 samples were taken, of which 24 were measured and dated, producing a felling date in the winter of 1609.

- Market hall from Titchfield, Hampshire

Not all of our samples have yet been analysed, but initial results indicate a felling date around 1619.

- House extension from Reigate, Surrey

Most of the timbers are re-used, so cannot be used to date the building. Samples taken from two original floorboards produced a felling date range of 1596-1632. Stylistically the building belongs to the first quarter of the 17th century.

- Brick drying shed from Petersfield, Hampshire

Four samples cross matched and gave a felling date of spring 1733.

Buildings that have been sampled but not dated:

- Medieval shop from Horsham, Sussex
- Medieval house from Sole Street, Kent
- 'Court Barn' from Lee on Solent, Hampshire
- 'Poplar Cottage' from Washington, Sussex

Richard Harris is also a director of Buro Happold and lectures on timber engineering at Bath University.

This article, which first appeared in the magazine of the Weald and Download Open Air Museum in Autumn 2007 was reproduced with their kind premission.

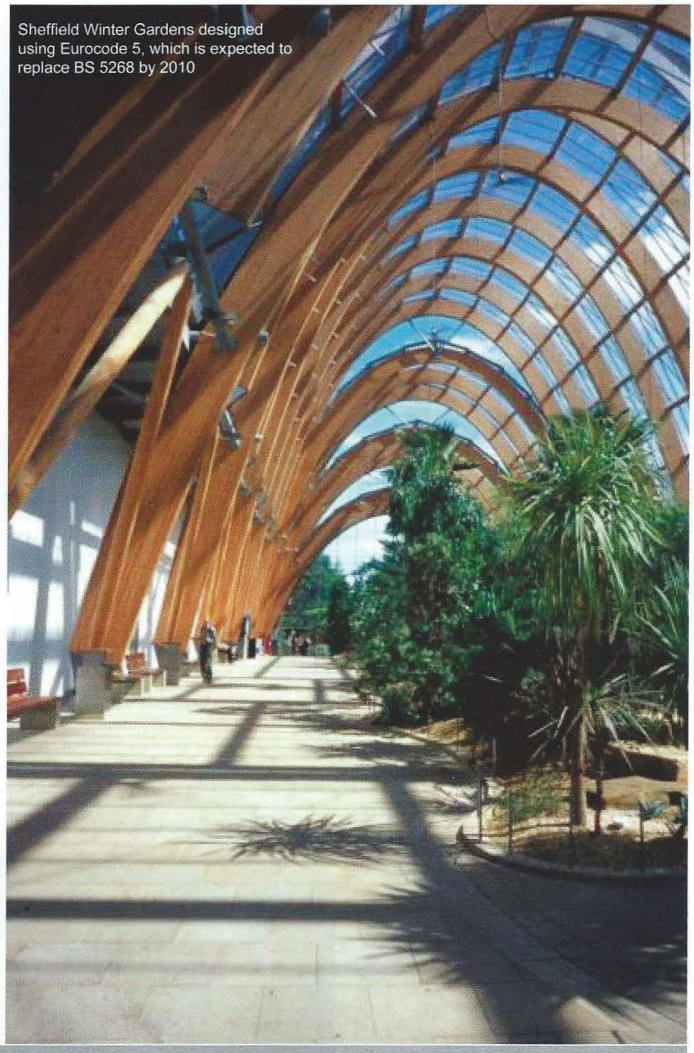
EU Condemns Burma/Myanmar Government Repression

In support of the actions of the United Nations Security Council, The Council of the European Union has issued a press release announcing the adoption of a series of measures condemning the Burmese/Myanmar government's recent crack-down on demonstrators within the country and re-affirmed an earlier declaration in which it urged the authorities to exercise restraint in the face of peaceful protest. The EU is also calling for the release of political prisoners and all those arrested since mid-August 2007, a thorough and impartial investigation of the deaths of demonstrators as well as other serious violations of human rights.

Increased pressure is being applied by the EU on the Burmese/Myanmar government by the introduction of an export ban on equipment for use in logging, timber and mining operations and an import ban on products produced by these industries. The aim is to penalize those responsible for the violent crack-down and the overall political stalemate in the country rather than harm the general population.

Despite these measures, the EU has stated that it will continue its humanitarian aid programmes aimed at the most vulnerable populations in Burma/Myanmar and the Burmese refugees in neighbouring countries and will consider increasing this assistance if necessary.

A review of these restrictive measures will be undertaken by the EU should the situation in Burma/Myanmar improve.


Sheffield Winter Gardens designed using Eurocode 5, which is expected to replace BS 5268 by 2010

The times they are a'changing

Rupert Scott, Regulations Consultant for TRADA, signposts the issues affecting timber related companies

The pace of change in building regulations, codes and standards is mesmerising. Government is a major agent of change, itself driven by the world and European political agenda concerning climate change, sustainability, social integration and security. Sustainability is becoming the major driver in planning and construction decision-making. Understanding the agendas, the regulations and, in some cases, the detail is therefore crucial for senior management in timber-related companies in developing strategies for successful future business.

The building regulations by necessity cover a wide range of issues, including structure, energy conservation, accessibility and waste. When it has a desire for change, Government has many tools at its disposal to ensure that it happens, some compulsory, some voluntary, including:

- Regulation
  - introducing mandatory changes such as air tightness testing in Part L
  - issuing new guidance
- Codes (linked to funding – eg Code for Sustainable Homes)
  - Compulsory elements
  - Voluntary elements
- General guidance, exemplars eg Energy Savings Trust booklets
- Grants (eg for insulation)
- Tax incentives (eg no stamp duty, first time sale, 'zero carbon' homes.

Structure

The development of a structural building code is an immensely important matter, simply because human safety is involved. This was so, even as early as the 18th century BC. Article 229 in the Code of Hammurabi, reads: "The builder has built a house for a man and his work is not strong: if the house he has built falls in and kills a householder, that builder shall be slain." A clear example of a simple, functional goal with clearly explained consequences!

One of the key features introduced in the revised Scottish structural standard in May this year was updated guidance on disproportionate collapse, covering all buildings. The revision introduced a fairly simple three-stage, risk-based approach, very similar to that found in Approved Document A: Structure for England & Wales, to ensuring that buildings will not be susceptible to disproportionate collapse:

1. Determine the building risk group.
2. Assess what additional measures to the design / construction will be needed to ensure that disproportionate collapse will not occur.
3. Design and construct, incorporating the necessary additional measures identified in stage two.

Another important statement contained in the Scottish Regulations, under Section 1: Structure for non-domestic building, is that, after 2010, national codes would no longer be acceptable. This means that by 2010 the design code for timber, BS 5268, will be superseded by Eurocode 5. In the transition period, both may of course be used, but there will come a cut-off point,

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Code for Sustainable Homes: defining new construction standards

which could prove painful if suppliers and designers leave it until the last minute to switch. Although these dates are not yet written into the England & Wales regulations, we anticipate the same timetable will apply.

A design code like Eurocode 5 is a rule-book for structural engineers. It sets out agreed calculation methods for checking the strength, stiffness and stability of buildings and other structures. EC5 is in three parts, the main code, Part 1-1; a section on fire design, Part 1-2; and a new code for the design of timber bridges, EN 1995 Part 2, the first of its kind in the UK. Let's use it at the Olympics!

Adopting the Eurocode system will mean two major changes: firstly every European country will use the same design codes, and secondly all the structural materials, including concrete, steel and timber, will use the same design basis – bearing in mind that the rules themselves for all materials are changing. This will be of great advantage to timber. EC5 introduces a totally different philosophy to BS 5268, using limit state rather than permissible stress design, thus bringing timber into line with other materials and making it more accessible for engineers and designers.

To assist with supporting material, TRADA in conjunction with the Institution of Structural Engineers will publish the 'Manual for the design of timber building structures to Eurocode 5' by the end of this year.

Energy Conservation

There is no doubt that energy conservation is at the core of the Government's response to concerns about climate change and its commitment to reducing CO_2 emissions. Nor is it any surprise to find the construction industry in the front line of its defence. Statistics vary, but the cost of running and heating buildings is estimated to account for more than half of CO_2 emissions in the UK and the manufacture and transportation of building materials a further 5% each.

Against this backdrop, Part L will inevitably be ramped up in future years. Government will use the regulations to drive through a 25% reduction in permissible carbon emissions (Target Emission Rate - TER), compared with Part L 2006, by the year 2010, with a reduction of 44% by 2013.

Future targets will include a revision of SAP 2005, the software programme used to calculate energy performance, a matter of fine-tuning issues which become more critical as we aim for higher targets.

Another date that developers have in their mind's eye is 2016, when Government desires that all new build dwellings will have achieved 'zero carbon' status, or Level 6 under the Code for Sustainable Homes, which became effective in April this year. Code ratings range from Level 1 to Level 6, based on a points system, and energy performance is one of the main areas for gathering points. Level 3 demands the 25% improvement on Part L 2006 mentioned above.

To achieve these targets, we will have to see improved thermal performance of building elements and a reduction in thermal bridging. Designers will also have to improve air tightness performance. The 10m3/hr/m2 of building envelope @50Pa as required in Part L 2006 will be nowhere near adequate. A target of 1m3/hr/m2 of building envelope @50Pa is nearer the mark and will require a significant shift in mindset by the construction industry. And at this level of air tightness, efficient mechanical ventilation will be essential.

Accessibility

Powerful lobbying in the past 20 years has brought about major changes in attitudes

Designing for "liveability" - space to manoeuvre a wheelchair in, should one be needed


Construction waste to landfill: 50% reduction by 2012

to mobility. Across the UK, improved healthcare has meant that ever-increasing numbers of people are living to a much greater age. Government is projecting a rise of as much as 70% in those aged 65 and above over the next 30 years. The percentage increase is even more dramatic for older age groups, with those aged 85 years and more expected to rise by 149%. The likelihood, too, is that these same people will endure decreasing mobility as they age.

Government has therefore had to acknowledge that it is better from the point of view of well-being and of cost to design homes which can easily adapt to this reduced mobility, rather than having to uproot the occupants to 'specialist accommodation' when they can no longer manage at home.

Three major philosophical principles underpin this progressive thinking, encapsulated in the Lifetimes Homes Standard (www.lifetimehomes.org.uk):

- Designing dwellings for 'liveability' –including certain things from the outset, like a kitchen big enough to manoeuvre a wheelchair in, should one be needed.
- The new concept of a 'principal living level' – a level which someone can live in the short to medium term, perhaps whilst they are recovering from a major operation – containing enhanced apartment (living room with specified minimum dimensions), kitchen and accessible sanitary accommodation.
- Design the dwelling to allow for easy future adaptation eg retrofit a stairlift in the existing stairs.

One major implication of all this is how much extra space will be needed for - and around - individual dwellings, to allow for safe, accessible car parking, for example. Yet housing demand is such that developments will be more densely packed than ever. The question still to be answered is, 'How do we do it all, all of the time?' Something surely will have to give.

Waste

One area on which Government is not prepared to compromise, however, is waste. The construction industry uses some 400 million tonnes of material a year. Only about 267 million tonnes ends up in buildings, however, with the balance – some 133 million tonnes – going to landfill. Amec estimates that the true cost of a skip is 16 times the skip cost – so something has to be done. We can start by moving from a 'waste management' to a 'resource management' mentality.

Government has laid down a two-stage target for reducing construction waste to landfill:

- 50% by 2012, compared with 2005 and
- zero waste by 2020

While the first stage is reasonably achievable, given the sheer waste of materials and resources currently seen on our building sites alone, zero waste to landfill is perhaps overly ambitious and therefore too daunting to be taken seriously. If we aimed for a reduction of 80%, we could concentrate our energies on that elusive 20% at a later target date.

Timber has a significant advantage over other materials in that it does lend itself to reuse and recycling and with a developing industry in biofuels, there is a potential additional outlet for timber waste - but the industry cannot afford to sit back.

Consultation on the Government's plans to make Site Waste Management Plans compulsory for all projects over £0.25 million in value, ended in July this year. Three-quarters of those who responded were in favour of compulsory SWMP – and it is already compulsory under the Code for Sustainable Homes, from Level 1 to Level 6. As stated at the outset, Government has many tools at its disposal when it desires change!

Conclusion

And quite clearly, the present Government is driving through change. By doing so, whether you like it or not, it is defining your market. Before setting your business plans and future targets, make sure you understand what Government is doing already – and what it holds in store.

Visit www.trada.co.uk and follow the link from the home page to the regulations & codes area for more information on key legislation affecting timber in construction.

IWSc course results

Between April and November 2007, a total of 125 candidates studied the Institute's Foundation and Certificate courses. Of these, 88 passed the Foundation course and 37 successfully passed the core module examination and completed the five optional modules to gain their Certificate grading. Within the system, 7 candidates had to re-sit their Foundation examination, and 3 more had to re-take the Certificate core module examination. All 10 candidates were successful at the second attempt.

Grading for successful candidates on the Foundation course saw 11 individuals obtaining a Distinction, 32 gained a Credit, whilst the remaining 45 candidates all managed the basic Pass level.

For the Certificate course, 36 individuals gained a Pass level and only 1 person obtained a Credit pass. There were no Distinctions this time.

The selection of optional modules taken ▶

on the Certificate course saw all candidates studying the softwood, panel products, carcassing and strength grading, and joinery and appearance grading. 78% of candidates followed the hardwood module and 21% studied an approved client module on engineered wood products.

Twenty-two companies supported the 88 candidates on the Foundation course, whilst 8 companies provided the 37 candidates for the higher Certificate course.

Popularity of Certificate Course Modules

Module	Subject	No. of candidates	% of candidates studying module
Compulsory			
Core Module	Timber Technology Wood Structures & Timber	37	100
Optional			
Technology Modules	Moisture in Wood & Timber		
	Drying	0	n/a
	Timber Processing	0	n/a
	Timber Protection	0	n/a
Resource Modules	Softwood	37	100
	Hardwood	29	78
	Panel Products	37	100
Use Modules	Carcassing & Strength Grading	37	100
	Joinery & Appearance Grading	37	100
Commercial Modules	Timber Trade Practice		
	Yard & Warehouse	0	n/a
	Operations	0	n/a
Client Specific Module	Timber Engineered Products	8	21

Foundation Course Results - April - Nov 2007

Name	Award	Company
Alden N.	Credit	A W Champion
Austin D.	Pass	Jewson
Baker C.	Pass	Arnold Laver
Banks D.	Credit	Arnold Laver
Barr S.	Pass	SCA
Bazyliewicz S.	Credit	Timbmet
Beresford K.	Credit	Arnold Laver
Best B.	Pass	Jewson
Bowen P.	Pass	SCA
Bowler A.	Distinction	Arnold Laver
Burton E.	Credit	Crown Timber
Carr R.	Pass	Arnold Laver
Collinson N.	Pass	Duffield Timber
Cook M.	Distinction	A W Champion
Daly B.	Pass	Noyeks Newmans
Devine D.	Pass	SCA
Dodson S.	Credit	Jewson
Drake M.	Distinction	Rowlinson Timber
Drewery S.	Pass	Jewson
Edge C.	Distinction	SCA
Fisher S.	Pass	SCA
Fitzgibbon T.	Pass	Jewson
Fraser D.	Credit	Arnold Laver
Fraser S.	Pass	A W Champion
Furst N.	Distinction	Hall & Tawse
Gardner J.	Pass	A W Champion
Goodwin B.	Pass	NHG Timber
Gowing S.	Credit	SCA
Grant S.	Pass	Haldane Fisher
Gwillim J.	Distinction	SCA
Gylby M.	Pass	A W Champion
Hammond R.	Credit	Jewson
Harrison M.	Pass	Jewson
Howarth S.	Credit	SCA
Hughes P.	Credit	Jewson
Irving R.	Credit	Arnold Laver
Jackson C.	Pass	SCA
Jay M.	Pass	Jewson
Jones M.	Credit	Jewson
Jones R.	Pass	North Yorkshire Timber
Kerr T.	Pass	Haldane Fisher
Lacey L.	Credit	Timbmet
Leary J.	Credit	Arnold Laver
Lindley N.	Pass	Arnold Laver
Lock R.	Pass	Jewson
MacDiarmid C.	Pass	A W Champion
Major H.	Pass	South London Timber
May G.	Credit	Jewson
McKeon C.	Credit	Noyeks Newmans
McLay S.	Pass	Christie Timber
Miller A.	Distinction	L & G Forest Products
Mills L.	Pass	Arnold Laver
Mitir N.	Pass	PNG Forest Research
Moczyk M.	Distinction	A W Champion
Muir D.	Distinction	Finnforest (UK)
O'Connor D.	Pass	Noyeks Newmans
O'Mahony K.	Credit	Arnold Laver
O'Sullivar J.	Credit	A W Champion
Parker S.	Pass	Jewson
Pomeroy M.	Credit	Jewson
Porter C.	Pass	Haldane Fisher
Purdy J.	Pass	Haldane Fisher
Rampley L.	Pass	Arnold Laver
Rescorl A.	Pass	SCA
Richardson G.	Pass	SCA
Robinson W.	Pass	Jewson
Rolfe J.	Distinction	A W Champion
Rushton P.	Credit	SCA
Shipman G.	Credit	Arnold Laver
Simmonds M.	Credit	Timbmet
Slaney B.	Pass	Jewson
Smith J.	Credit	Arnold Laver
Starie K.	Credit	SCA
Stove L.	Credit	Timbmet
Taylor M.	Credit	Jewson
Thacker J.	Credit	Buildbase
Thornton T.	Pass	Jewson
Traynor G.	Credit	Arnold Laver
Twaites B.	Distinction	UCM Timber
Wall S.	Credit	Jewson
Walsh L.	Pass	Arnold Laver
Walsh S.	Pass	SCA
Wharrier A.	Credit	Arnold Laver
Whelan S.	Pass	Noyeks Newmans
White M.	Pass	Jewson
Wilkie M.	Pass	Finnforest (UK)
Wiser S.	Credit	Arnold Laver
Woods M.	Pass	SCA

Certificate Course Results April - Nov 2007

Name	Award	Company
A Clegg A.	Pass	Jewson
Fletcher S.	Pass	Pacific European Timber Agency
Giles M.	Pass	Finnforest
Good W.	Pass	International Timber
Graham J.	Pass	Arnold Laver
Ison-Jacques S.	Pass	Jewson
Johnson M.	Pass	Finnforest
Johnson S.	Pass	Jewson
Kerrigan S.	Pass	Jewson
Lane D.	Pass	Jewson
Leach J.	Pass	Jewson
Little R.	Pass	Finnforest
Marsden A.	Pass	Finnforest
Marsden A.	Pass	Akzo Nobel
McCann O.	Pass	Jewson
McKillop W.	Pass	Finnforest
Murphy S.	Pass	Jewson
Nash J.	Pass	Arnold Laver
Osborne T.	Pass	Jewson
Overton M.	Pass	Finnforest
Peach C.	Credit	Arnold Laver
Peat J.	Pass	International Timber
Percival S.	Pass	Jewson
Rigby H.	Pass	G E Robinson
Robinson P.	Pass	Jewson
Saunders S.	Pass	International Timber
Shepherd M.	Pass	Finnforest
Smyth M.	Pass	Jewson
Sowersby B.	Pass	Jewson
Spiers C.	Pass	Jewson
Tarnawski P.	Pass	Finnforest
Taylor D.	Pass	Arnold Laver
Thacker A.	Pass	Jewson
Thomas DJW	Pass	Jewson
Ward J.	Pass	Jewson
Wilsoncroft G.	Pass	Jewson
Woodward R.	Pass	Arnold Laver

For further information about IWSc courses, please telephone Tom Newman on 020-7256-2700 or email him at tom@woodinstitutes.org

Review & Redefinition of IWSc Membership Grades

It had become apparent that the Institute's long standing membership grades were out of step with the majority of similar organizations. The nomenclature of some of the existing grades gave, in some cases, a false and even demeaning impression of status relative to other bodies.

This gave cause for concern within the Council of Management as it was recognized that this may be acting as a possible disincentive for individuals to join.

Following a great deal of research by the review committee, the Council of Management has finally ratified its proposals and has redefined all the membership grades as given in the table.

During the review process, the committee has been mindful to be clear as to where the balance of its priorities lay between protecting its self-interest through sales of training courses and acting as the professional home for appropriately qualified individuals; the need to offer a clearly defined system of progressive professional recognition; to ensure a multi route approach for new entrants at individual grade levels and to bring the Institute's grading system in line with conventional thinking.

The new grades were established to conform as closely as possible to mainstream institutes which have a "Member" as its core, corporate recognition level and a higher level corporate grade of "Fellow". Below these would exist a range of grades acknowledging progression towards full Member status. Accordingly, the main changes to the membership grading system are as follows:

- The Associate grade will merge with the old Member grade with both being reclassified as Member. This reflects the fact that in most institutions the Associate grade was a non-corporate grade with only a low level qualification to distinguish it from the Affiliate.
- The original Certificated member will now become a Licentiate.
- The Institute has introduced a new grade to be called "Technician".
- The ordinary member will now be known as an Affiliate.

There are no changes to the grades of Fellow and Student.

It is worth noting that at any one level of professional recognition, a multiple access route now exists which allows entrance through alternative recognized qualifications.

This has not been an easy task for either the review committee or the Council of Management, but it is hoped that members will recognize the fact that the Institute must keep abreast of ongoing changes in our industry and within the modern thinking on qualifications and training.

Redefinition of IWSc Membership Grades

Old Grade	New Grade	Definition
Fellow	Fellow	Awarded to a person who has rendered distinguished service to the advancement of wood science and technology, industry, craft or to the Institute. Fellows may use the letters **FIWSc**
Associate & Member	Member	Awarded to a person who: - Has gained the Institute's Diplmoa award (formerly Associate award), or - Has obtained an approved degree or equivalent wood science or craft qualification at S/NVQ Level 4 from another source, or - Has at least 10 years experience in timber-related trade with at least 3 years in a senior position. Members may use the letters **MIWSc**
Certified Member	Licentiate	Awarded to a person who: - Has gained the Institute's Certificate award, or - Has obtained an approved equivalent wood science or craft qualification at S/NVQ Level 3 from an approved source, or - Can provide proof of relevant technical expertise. Licentiates may use the letters **LIWSc**
-	Technician (new grade)	Awarded to a person who: - Has obtained an approved qualification in timber technology at S/NVQ Level 2, or - Has obtained an approved craft qualification at S/NVQ Level 2, or - Can provide proof of relevant technical expertise including that gained via an apprenticeship. Technicians may use the letters **TIWSc**
Ordinary Member	Affiliate	Open to any applicant and requires no formal qualifications for entry.
Student	Student	Open to those engaged on the Institute courses or on other wood-related courses.

American black walnut in the Virgin Atlantic Sunken Lounge, Heathrow Airport
Photo: AHEC

That old black magic - American black walnut

American black walnut (Juglans nigra) is one of the most highly prized hardwood species in North America. It was the "blonde wood" fashion movement of interior design throughout the nineties that temporarily dislodged walnut from its perch as king of American hardwoods. Dark coloured, rich, exotic and luxurious, describe well this handsome species growing throughout the eastern United States. Those sentiments are valid again today as once again walnut is in vogue. What has changed is the world around walnut. American hardwoods have increasingly taken their place as the world's major sustainable source of temperate hardwoods and designers have begun to hark back to darker woods after a decade of light-coloured interiors. The use of walnut provides them with richness and contrast in furniture, joinery and flooring in a temperate hardwood.

Name

American black walnut is often referred to as American walnut or simply black walnut. In the U.S. domestic market it is sometimes called eastern black walnut although ironically it grows to a more westerly extreme (in Kansas) than some most eastern hardwood species.

Provenance in USA

This species likes best the well-drained loam sites, especially in the Appalachian Mountains and Mid-west. However, its natural range extends from Vermont, Michigan and the Lake States as its northerly boundary to north-western Florida and Georgia in the South. It also extends westwards to eastern South Dakota, North-eastern Nebraska, western Oklahoma, Kansas where in some stands it is abundant, and into central Texas. However, walnut does not grow in the Mississippi valley or delta, or along the Gulf of Mexico coast of the southern States or the Florida peninsular. Some trees grow in southern Ontario in Canada, but not in commercial volumes.

Uniqueness

Juglans nigra is only native to North America and is quite distinct from European walnut which is a different species. It often grows with Juglans cinerea, which is butternut or white walnut, but does not hybridise easily if at all. However, efforts have been made to produce walnut hybrids with other Juglans species, more for nut production than timber. In natural forest stands, as opposed to plantations, the trees can be found up to 150 feet in height and 2 to 4 feet diameter at breast height. However, 70 to 100 feet is more normal and the diameter is usually quite uniform through the length of the stem.

Difference from European walnut

The European walnut tree, Juglans regia, is smaller and rarely reaches more than 75 feet in height and produces a much shorter log. It should be noted that the so-called European walnut is native only to a growing range from Turkey eastwards to Kashmir, and that it was, in fact, introduced into Europe by the Romans.

The texture of European walnut tends to be coarser and the colour more uneven. The colour of American black walnut is generally darker that its European cousin. The heartwood of American black walnut is differentiated more strongly from its sapwood, than European walnut, for which reason much is steamed for export in order to reduce the difference. The grain pattern of America walnut also tends to be stronger in character. However, its main advantages are the longer lengths and widths in which it is available as lumber. European walnut has low stiffness, medium bending strength and resistance to shock, but good impact resistance.

Technical & working properties

Reference is made here to the "Guide to American Hardwoods" published free of charge by the American Hardwood Export Council. The physical and working properties are described as well as the very wide range of applications for which it is suitable.

The sapwood of American walnut is creamy white, while the heartwood is light brown to dark chocolate brown, often with a purplish cast and darker streaks. The wood is generally straight grained, but sometimes with wavy or curly grain that produces an attractive and decorative figure. Walnut is a tough, hard timber of medium density, with moderate bending and crushing strengths and low stiffness. It has a good steam bending classification.

Walnut works easily with hand and machine tools, and nails, screws and glues well. It holds paint and stains very well and can be polished to an exceptional finish. It dries slowly, and care is needed to avoid kilning degrade. Walnut has good dimensional stability. It is rated very resistant to heartwood decay and is one of the most durable woods even under conditions favourable to decay. The sapwood is, however, liable to attach by powder post beetles.

Average Weight (12%mc) :	609 kg/m3
Average Volumetric Shrinkage (green to 6%) :	10.2%
Modulus of Elasticity:	11,584 MPa
Hardness :	4,492 N

Grading of walnut

Historically the grading rules for 6' and 7' FAS and FAS1F (FAS one face) walnut have been designed to encourage better utilization and are thus graded on a "defect" basis rather than a "clear-wood cutting" basis. Propriety grades for walnut are commonly developed between buyers and sellers, and are allowed under the inspection rules of the National Hardwood Lumber Association (NHLA).

Species range variations

The only variation within the American species is determined by growing site conditions of soil, latitude and climate. There is a distinct difference in lumber from trees that have grown at different rates. Within its native range the growing season can vary from 140 days per year in the north to 280 days at the southern extreme in western Florida. Furthermore, the mean average temperature can range from 7°C in the north to 19°C in the south.

Current applications

The harvesting of black walnut is now mainly for veneer and lumber for fine furniture, cabinetry and joinery although it is increasingly used for flooring and has always been used for gunstocks. But the original development of uses for walnut in the USA also makes interesting reading. Although a prime timber for sliced veneer logs and sawn timber, the trees were also extremely important for the production of nuts for edible and many non-edible uses.

During World War II, aircraft pistons were cleaned with a "nut shell" blaster and this idea was carried into the auto industry, where manufacturers used the shells to "deburr" precision gears. Ground-up shells are also used to clean jet engines; as additives to drilling mud for oil drilling operations; as a filler to dynamite; as a non-slip agent to car tyres; as an air-pressured propellant to strip paints; as a filter agent for scrubbers in smoke stacks; and as flour-like carrying agents in various insecticides. Thus, the incentive to propagate, improve and regenerate this species has been great!

One of the most important applications is the use of walnut veneer and solid lumber used in contrast to other species, particularly ash, maple and oak.

American black walnut table and bench
Photo: AHEC

American walnut can be substituted by American gum, which has a similar grain pattern but must be stained to match walnut.

Market developments & export distribution

American black walnut has always been popular in world markets but suffered from a loss of interest in the nineties due to the fashion for lighter hardwoods that became known as the "blonde wood" movement. Italy, which lacks sufficient supplies of its so-called native "noce", has long been an important destination for American black walnut. More recently, it has regained its global popularity and has become highly prized throughout Asia..

Availability, current & long term (renewability)

In the USA there is reasonable availability of sawn lumber with regional limitations. As already indicated, the renewed popularity of the species is placing pressure on supplies of kiln dry lumber ready to ship and this is reflected in high prices. Currently the availability is limited in some lumber specifications. Sliced veneer is readily available. Regeneration of walnut takes various forms, primarily from seed that squirrels bury and fail to recover. Seed crops peak at 20 to 30 years and last until100. Winter temperatures trigger spring germination and strong development of a taproot gives good survival rates. Growth rates exceed that of oak. Stumps sprout after fire, and grafting and budding techniques can now achieve 80 to 100% success rates. Walnut is more floor-tolerant than species such as cherry, but is shade tolerant and thus needs release where in competition with faster growing species such as tulipwood. Cloning for plantations has been developed and three timber-type clones, chosen for their outstanding straightness, anthracnose resistance, or late spring foliation, have been patented by Purdue University.

Environmental implications of harvesting

Walnut provides food for wildlife and humans and, being naturally scattered, is part of the great biological diversity of the eastern U.S. hardwood forests. It rarely occurs in pure stands and is associated with many species, particularly oaks, maples and tulipwood. Many farms have individual specimens that become available for harvesting. The harvesting of mature trees, the release of younger specimens and culling of poorer quality stems is part of the process of selective harvesting and regeneration that has resulted in a continuous increase in standing timber annually since 1945. The development of planting also gives this species another dimension not generally found with other American hardwoods.

References of installations with public access

Numerous examples of American black walnut are available in the UK. Notable are the dais in the central nave at St Paul's Cathedral and joinery at the Chinese scroll gallery in the Ashmolean Museum in Oxford.

Corporate members

The Council of Management wishes to record its thanks to those listed below for their support as Corporate members

A W Champion Limited
Akzo Nobel Specialist Coatings
American Hardwood Export Council
Anglo-Norden Forest Products Limited
Arbor Forest Products Limited
Arch Timber Protection
Arnold Laver and Company Limited
Border Oak Design and Construction Limited
British Woodworking Federation
Brooks Group Limited
BSW Timber plc
Build Center
Buildbase Limited
Canada Wood UK
Capricorn Timber Limited
Carver (Wolverhampton) Limited
Coillte Teoranta
Crown Timber plc
Finnforest (UK) Limited
Forest Services, Northern Ireland
Hall and Tawse Joinery
Holmen Timber
Hoppings Softwood Products plc
ICI Paints
International Timber
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LS Group
MDM Timber Limited
Medite Europe Ltd
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The Carpenters' Company
Timber Connections
Timber Trade Federation Limited
Timber Trade Journal
Timbersource Limited
Timbmet Limited
TRADA
Travis Perkins plc
Wood Protection Association

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For details of individual and corporate membership, contact the Institute direct

A message from the President - Geoff Taylor

I am now half way through my first term as President of the Institute of Wood Science. It has proved to be challenging and "CHANGE" has been the message and will continue to be the theme.

This anonymous quotation "Science finds, industry applies and man conforms" will provide you with a simple insight into the future of the Institute. We are rightly proud of our history of being at the centre of excellence in education for wood science and technology, but now is the time to move on, to reform and modernize.

The Council of Management has been examining the Institute's relevance and the identity we currently portray to today's timber industry and that of our major customers, in particular the construction industry. Continuing to transmit information about wood and redefining our identity as an essential knowledge and information resource are both central to our development. We shall be providing information on various developments in wood science and innovative wood products as these are directly relevant to the modern construction industry.

Wood is the only truly sustainable building material we have, and the knowledge, training and experience that the Institute provides are vital to increasing confidence in specifying and using wood.

I am working closely with my senior Vice-President David Venables, AHEC's European Director, and junior Vice-President Charles Trevor, Wood for Good's Managing Director, to make longer term plans for the benefit of both our corporate and individual members.

The responsibility for change cannot be borne alone by the Institute's knowledge and information base. We are readily engaging with more members and are encouraging the younger generation of timber technologists to become involve as well as looking to forming alliances with like-minded organizations.

To say our future will be challenging is an understatement; but change can be positive.

IWSc at Interbuild 2007

The IWSc shared an exhibition stand with the Institute of Carpenters in the Timber Zone at the this year's Interbuild Show, manned by staff and volunteer members to whom the Institute is very grateful.

Staged in association with TRADA, the Timber Zone is the arena for companies to showcase their timber and timber related products, services, applications and capabilities. Starting in 2006, the Timber Zone became enormously popular with over 11,000 visitors stating that they were interested in meeting suppliers with timber products and solutions. Throughout the event, TRADA conducted a programme of professional seminars. Visitors were also able to take part in guided tours that highlighted the latest innovations in timber-based building.

This year it was possible to see timber frame manufacturers, timber frame erectors, treatment providers, consultants and design solutions providers, hardwood suppliers, softwood suppliers, timber windows, doors and decking manufacturers, OSB manufacturers, importers, wholesalers and distributors, as well as specialist tools and machinery suppliers, trade bodies, associations and institutes. IWSc was able to canvass membership and display details of courses and membership grades.

New membership benefit

The IWSc has joined forces with LogBuy Ltd who specialise in the provision of benefit packages for organizations. Being part of LogBuy's nationwide membership enables the Institute to offer its members exclusive discounts on a range of products and services from a variety of leading suppliers including computer equipment specialists Apple Stores and Hewlett Packard, BT Business Services, the RAC, Esso and airport parking company Purple Parking to name but a few.

To use LogBuy just log onto the LogBuy website – www.logbuy.co.uk - and enter the IWSc unique password which you can obtain by telephoning the Institute's London office. This will take you directly to the IWSc's dedicated members benefit site.

Those who have supplied the Institute with their contact email addresses will automatically receive updates of all the latest offers and new supplier deals.

If you have any questions about this membership benefit programme please contact Sally Abbot at the Institute office in London.

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