WOODfocus

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The magazine of the Institute of Wood Science

Jubilee Conference

London, Thursday 3rd November 2005

The Institute, celebrating fifty years since its foundation, has announced details of the Jubilee Conference to be held this year in Carpenters' Hall in the City of London on 3rd November. The theme "Wood – a Modern Material for a Modern World" reflects the growing interest in wood science and the confidence of the Institute in its future.

Foster's Sage Performing Arts Centre - main auditorium. Photo courtesy of AHEC

Working with a small conference committee, President Vic Kearley and Executive Director Jim Lumsden have developed a joint dinner and conference celebration programme to give members the opportunity of meeting in London at Haberdashers' Hall on Wednesday evening before moving across to Carpenters' Hall for the Thursday Conference. A maximum target of 200 delegates has been set by the committee for Turnstone Communications who are again responsible for promoting the annual conference.

The Jubilee Conference programme includes keynote speakers from the world of architecture, construction, and design, and will give delegates the opportunity to view the future of wood and the scientific knowledge base and training behind it. The day is planned to commence with a welcome from the President and a joint review of the first fifty years by a number of Past Presidents. Keynote speakers will be Amanda Baillieu, Editor of RIBA Journal and Luke Hughes, eminent bespoke furniture designer/maker to architectural, corporate, institutional and ecclesiastical projects. From Milan, Prof. Arturo Dell' Acqua will discuss the current technology and innovation in wood for architecture, and Dr Peter Bonfield, MD of BRE Construction, will assess the future for wood. Two case studies, one of which is Foster's Sage Performing Arts Centre, and also a review of The Wood Awards winners in 2005 will complete the programme. The chairmen for the two main sessions will be Giles Downes, whose architectural practice was responsible for the rebuild of Windsor Castle after the fire, and Richard Harris - wood guru at engineers Buro Happold.

More information will be available on www.iwsc.org.uk.

The conference is expected to appeal to delegates from a wide range of professions within the wood sector, design and architecture. Flyers will be sent out in early May and any members able to help with distribution through house journals or other media should contact the Institute office. Major sponsors this year are the American Hardwood Export Council, Canada Wood and the "wood.for good" campaign, together with support from a number of corporate members of IWSc, providing them with a good platform to promote their commercial interests while also demonstrating their support for the Institute. This Jubilee Conference also provides a wonderful opportunity for members to engage with their Institute and to share in the momentum that will carry it forward into the next fifty years.

wood. for good.

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Award winning buildings by Hopkins Architects

Paper from the 2004 Annual Conference in Birmingham by James Greaves, Director, Hopkins Architects

Why did we start using wood?

We first used wood in 1990 for the auditorium in our new Opera House at Glyndebourne, in Sussex. The inspiration for the use of timber came from studying the Teatro Olympico, in Verona by Andrea Palladio, where a timber amphitheatre is constructed within a brick box. We adopted the same approach because it was consistent with our requirement for a simple palette of materials that harmonised with and complimented each other. For this building we chose handmade bricks, selected to match the existing house together with reclaimed North American pitch pine which we had sourced from redundant bonded whiskey warehouses in Glasgow.

How does wood fit in with our practice ethos?

Our designs are rooted in an understanding of history. A number of our commissions, following on from Glyndebourne, were set in quintessentially English settings, namely: new sheltered housing for the Charterhouse, Islington, London; new science laboratories for Sherborne School, Dorset and The Queen's Building, Emmanuel College, Cambridge. These projects all involve new buildings for traditional institutions within historic settings. The existing buildings tend to be masonry, using timber for elements such as screens which form partitions to colonnades and to halls, together with the structural roofs. The construction methods were robust using generous sections of timber to convey the character of the material. Our approach has been to understand the essential qualities of the materials within these existing buildings and use modern methods to achieve a similar effect in our new projects- but one that is rooted in our time.

Moving to hardwoods.

A common characteristic of these medieval buildings is that the wood used was usually a hardwood and most commonly oak. There was a plentiful supply of oak in earlier times and this was mainly used for the construction of ships for the navy but also used in buildings. It was therefore a natural decision to use the same material for the new projects that we were designing within these surroundings.

Projects that use hardwood structurally.

In the previously mentioned buildings where we have used oak for the non-load bearing screens we have adopted a traditional post and rail system. The structural use of oak commenced with the Queen's Building at Emmanuel College, Cambridge where we developed a composite hardwood and stainless steel truss solution for the roof. This then lead to Portcullis House where we designed a timber barrel vaulted roof structure and finally to the Haberdashers' Hall where we developed a diagonal timber and steel grid solution for the roof.

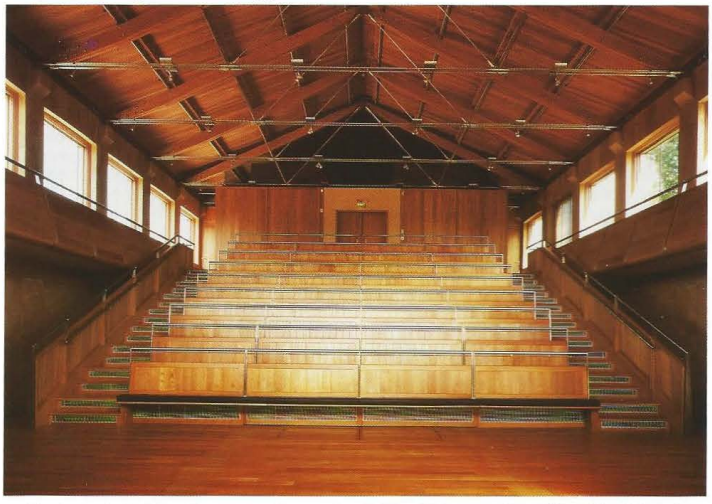
Three case studies.

To explain our design progression here it is useful to examine these projects in greater detail.

The Queen's Building, Emmanuel College, Cambridge.

The Queen's Building at Emmanuel College is designed for lectures, college ceremonies and chamber music recitals, its auditorium is a double-height D-shaped room with a steeply raked block of 140 seats facing into the curve. A narrow gallery, or ambulatory, overlooks the performance space from the upper level. Four more college rooms occupy most of the rest of the building. They are used for receptions and seminars, as well as common rooms for the students. The ground floor of the building is completely surrounded by a colonnade, and a passageway cuts right through it, linking a restored arcade in the corner of New Court with a gate in the wall of the Fellows' Garden opposite. The main entrance is buried in the middle of the plan, where the passageway crosses the longitudinal axis of the building. There are two staircases, both spirals: one carved out of the interior beside the entrance lobby; the other housed in an almost freestanding satellite drum of glass blocks in a steel frame, with a frameless glass link to the parent building.

The building is constructed using load bearing Ketton limestone (the stone used by Christopher Wren for the nearby college chapel). The elevations comprise a frame structure of piers and flat arches which have been post-tensioned using stainless steel rods. The frame is infilled with loadbearing ashlar panels of stone or glazing to suit the requirements of the spaces behind. Precast concrete 'kneeling blocks' are introduced into the piers at the springing point of the arches to receive the thrust. Structurally the stainless steel rods replace the pinnacles or buttresses of a medieval church.



The Queen's Building, Emmanuel College, Cambridge. Picture courtesy of The Wood Awards

Behind the ground floor masonry colonnade is a non-load bearing external wall screen. This is finished both internally and externally with North American oak panelling. Great care had to be taken during the manufacturing process to ensure that the moisture content of the oak was correctly assessed to ensure that joints were adequately sized to accommodate any movement due to the increase in moisture. The external oak is treated periodically with beeswax.

Composite straight and radial trusses support the roof. The top members of the truss are manufactured in solid lengths of 250mm deep North American oak. These oak top chords are splice connected at their mid points to limit their lengths and thereby increase the available stock for selection. This was important as each length of oak was visually stress graded and it was more economic to consider 3 metre lengths as opposed to 6 metre lengths. The stainless steel splice connection also formed the head of the centrally supporting strut connectors. The tie rods at the base of the truss are formed from pairs of 20mm diameter stainless steel rods with pin connections at each end. The trusses sit on cast stainless steel shoes which themselves sit on corbelled pre-cast concrete supports. A slip membrane was necessary at the base to ensure that the masonry walls did not move when the trusses were being tightened as the roof load was being applied. The roof is constructed with oak boards forming the base of a series of stressed skin panels spanning between stainless steel circular purlins fixed to the top of the trusses. The loads in the roof structure were high due to the shallow pitch and the inclusion of a layer of concrete within the roof itself to provide the necessary acoustic insulation from outside noise.

The doors and frames, screen walls, floors and the curved gallery fronts are all constructed from North American oak boarded panels. The bespoke designed auditorium and gallery seating is also made of oak with stainless steel fittings.

Portcullis House, Westminster, London

Portcullis House is in a unique position, it is in a World Heritage Site, it is a neighbour to the Palace of Westminster, as well as Norman Shaw's Scotland Yard building. It contains offices for 210 MP's and their staff, Select Committee Rooms together with restaurant and common facilities arranged around a courtyard plan.

Solid Derbyshire gritstone columns form the primary external structure and have been carefully integrated with the bronze glazing elements of the façade. The interior spaces use exposed precast concrete soffites to both help balance the environment within the rooms, bounce daylight deeper within the building and provide long lasting self finished ceilings. The other primary interior finish is oak, which has been used to panel the MP's offices and the public circulation areas.

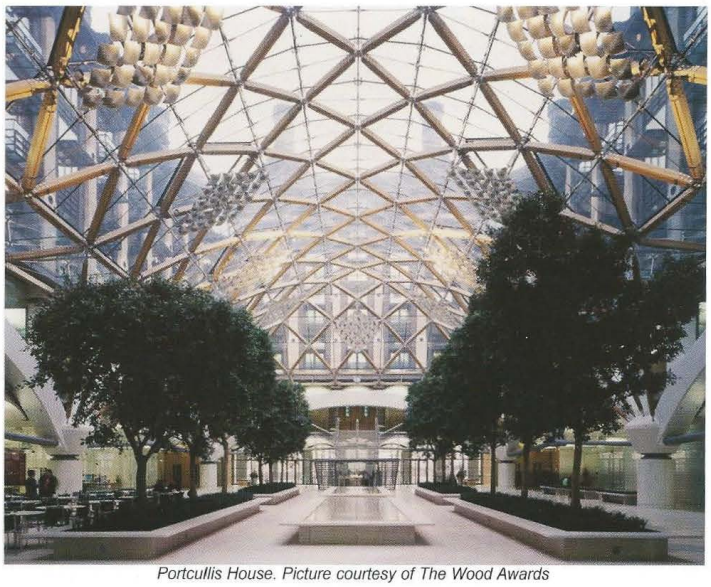
An important element of this building is the new courtyard, which from the outset was conceived as the central hub of parliamentary activity. It has links to the adjacent Norman Shaw buildings and a secure underground link to the House of Commons next door. The ground plan has been organised with restaurants, coffee shops and the library around its periphery with seating and a landscaped court in its centre. Access to all other parts of the building is from this central space.

The roof is a modern interpretation of the medieval hammer-beam structure of Westminster Hall, the central space of the Palace of Westminster. Oak is the common material for both roofs but for the new courtyard roof this is in-filled with glazing as opposed to timber boarding.

The development is built over the Westminster Underground Station and so the internal points of structural support are limited to six columns which are carefully located between the railway tracks below. This feature directly informed the design of the roof which was initially conceived as an inverted 'net' structure channelling all loads down to these points. Eventually, through a process of rationalisation and simplification this structure finally became a barrel vault section. The geometry of this roof form allowed a component based system of construction, a 'kit of parts', comprising beams and nodes tied together with a stainless steel bracing system which in turn supports a glass roof.

Having decided on this component based approach we needed to resolve how the individual structural members could be connected over a curved section whilst maintaining straight beam sections. The answer lay in creating a central spherical node that would allow perpendicular connections from any point around its surface.

Grooved stainless steel plates with slotted anchor holes provide adjustment in the length of the beam to node sections. North



Portcullis House. Picture courtesy of The Wood Awards

American white oak was chosen for this roof because of its strength, colour and durability and because it is supplied from a sustainable source. The beams are of a laminated construction as this is more economic and provides higher structural quality. The beams are constructed from two pieces of glulam, each made up of six laminated layers. The complete barrel vaulted roof is held up by raked and tapered oak supports that transfer the loads directly to the six primary supporting columns. A new UK structural grading system for American White oak was established during this project.

The Haberdashers Hall, West Smithfield, London.

The Haberdashers Company moved away from their historic site in the City to make way for a commercial redevelopment. They had occupied this site for the last 700 years and had seen two halls destroyed. The first was burnt down during the Great Fire in 1666 and the second was destroyed after being bombed in the Second World War. Following a competition we were asked to design a new hall, for the Company, on a site in West Smithfield.

The design develops the inside of an urban block into a calmly ordered oasis within the vibrant Smithfield Conservation Area. An entrance passageway leads from the street, under a grand former warehouse, now converted into loft apartments, to a sequence of external and interior spaces.

The first space is a square courtyard surrounded on three sides by a brick colonnade. A recessed oak panelled wall set behind the brick piers forms an ambulatory to the southern and western sides of the courtyard. To the east is an open loggia and to the north is an Orangery. Although enclosed by glazing, the materials within the Orangery continue the external character of the courtyard: yorkstone paving, handmade brick piers and walls, and a soffit of white precast concrete. From the Orangery and the adjacent Loggia, a generous spiral staircase rises to the first floor where the formal spaces are located.

Upon arriving at the first floor one enters the Reception Gallery, a long narrow oak panelled space conceived as a modern interpretation of an Elizabethan long gallery. To the north side of this Gallery is the Courtroom, flanked by Committee and Luncheon rooms and at the far end is the Livery Hall. This is the building's principle space and it is completely finished in North American white oak. The space is defined by a double cube geometry derived from the 20m square external courtyard at the centre of the building. Wall and roof surfaces are flat and flush, and whereas the brick structure is expressed in the setting out of the wall panelling, the structural diagrid of the roof forms the finished soffite to the room. It is constructed from a 'kit of parts', comprising 400mm deep glulam oak rafters, with fabricated stainless steel shoes fixed at each end. These are bolted to various configurations of stainless steel node connectors. The bracing system for the roof is fabricated from 19mm stainless steel rods and 60mm diameter stainless steel struts connected to the roof nodes by pins. Diamond shaped slatted oak acoustic panels infill the grid. The oak is fire treated and finished with beeswax. Above the Hall, the roof covering is constructed from lead-clad diamond-shaped tiles that resolve the geometry in the same way as the timber diagrid underneath.

Next moves.

We have built upon the knowledge and experience gained from these projects and developed our thinking further in the following schemes: our competition entry for the new Rolls Royce Production Centre in Goodwood where we have designed a timber grid shell; Norwich Cathedral's Visitor Centre where we have supported a traditional roof on hardwood raking supports; The Cakehouse in St James' Park, using larch for the first time and Alnwick Garden's Visitor Centre where we are using an oak gridshell with pneumatic foil cushions for the roof envelope. Clearly the use of hardwoods is, and will continue to be, at the forefront of our design vocabulary.

The Haberdashers Hall. By courtesy of AHEC

The Haberdashers Hall. By courtesy of AHEC

The land, the oak and the Master Carpenter

By Matthew Hoad BA(Hons) Dip Arch AIWSc RIBA

The evolution of a design classic

I think that it is fair to say that the best ideas are the simplest. Objects like the field gate have evolved over millennia through constant improvement and refinement. An analogy could be made with the wine bottle, which having reached the state of functional perfection may never be improved on. The essential design principles on which these objects are based allow for regional interpretation based on tradition, economics or the materials to hand.

Brightling, in East Sussex is one of the most wooded villages in the country and once had powerful industries reliant on the forests. Many of the structures and everyday objects were made of wood until the early part of the last century. The oak field gate is perhaps the last and most enduring example of the early timber based industry, as was the man who made them.

An ancient working landscape of forests and fields.

Derek Angus French (1924 – 1993) trained as a wheelwright and ran a carpentry business with his brother from a workshop handed down to them by their father. The space was a living museum with every conceivable hand tool packed in drawers and hung from the ceiling. The living museum felt like a set from Raiders of the Lost Ark, entombed by large dusty cobwebs covering strange objects and lit by filtered shafts of light.

The main floor of the workshop.

Function, form and symbolism

The field gate is a functional object and the dynamic part of an enclosure made in the best local English Oak (*Quercus robur*), to endure the weather. It is part of a rural industry and has to be strong, durable, ergonomic and also economic to produce both in material and time. These gates were hand made and not part of a throw away culture and so have to be treated with respect. Mechanised interpretation has produced ubiquitous metal gates like the bars of a prison and wooden ones made from other timber species (often softwoods) which usually require preservatives.

The gate geometry and proportions bring together two worlds, that of animals and humans. The main members are a 'tour de force' with spacing of intermediate rails tailored to livestock size. The top rail is tapered from the butt to the head, with heavy steel hinges firmly fixed into the butt post, and a secure latch bolted to the head post to hold the gate firmly closed.

A special Yeoman gate propped upright with posts awaiting collection.

The rules of construction have evolved through trial and error and involve tacit knowledge and an unwritten design code. The oldest and most sophisticated of the gates had estate symbols integrated as part of the top rail in the form of a shaped jowl. Brighling Park estate is an example of where this system was employed to define its boundaries. It was particularly useful to ensure the illiterate people knew where not to trespass, as the field gate is a point of control and of transition to another's land.

A jowl from a fallen gate with the hinge removed from the old Brightling Park boundary.

Avoid being 'Occard' and respect your tools

Dimensions and proportions were conveniently recorded on 'story poles' made of 2x1 for direct transfer to each timber member. Tried and tested timber sizes and detailing provided the necessary information to make the construction efficient and simple. "I'm not much of a draw'er", he once said, but his sketches in a thick carpenters pencil were of an impressionist artist and made with simplicity showing overall form and dimensions.

Looking after the tools was a very important part of the job and Saturday morning was taken up just sharpening tools on oil and wet stones. Good tools were expensive as any good tradesman knows, and were treated with care. Many of the tools were home made like the ripsaws cut from sheet metal by file.

A saw for every job hanging from the wall with wood stove below.

I was taught carpentry in the workshop the old fashioned way, which meant that you had to learn how to use the hand tools in the most economical and practical fashion. This made sense as being 'occard' could damage tools and would not produce the truest or finest finish. Marking with pencil had to be done first time. When I had drawn a line the timber was taken away for me to cut no matter how faint or badly done. This method of teaching was precise and made you think carefully about what you were doing.

The workshop was more than a place to work and was a social space full of life from 7 a.m. to dusk. The work area filled half the shop and to the rear was an impenetrable wood store hiding kegs of black powder used for blowing stumps and shelves of paint pots and goodness knows what else. Best of all was the Cuban cigar cupboard filled with chocolate and liquor, which was opened after a good days work.

A reclaimed washstand formed the workbench.

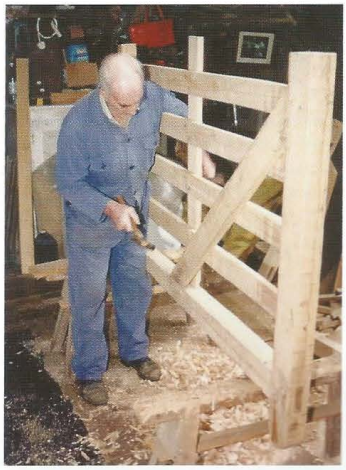
General store and paint shop retreat to the north.

The good, the bad and the fire wood

The timber was stored in the woodshed in the form of logs and baulks from the local saw mills stacked carefully to avoid drying distortion. The best bits of quarter-sawn oak with 'flower' were put aside with reclaimed antique mahogany boards for furniture and off-cuts used for the shop wood stove.

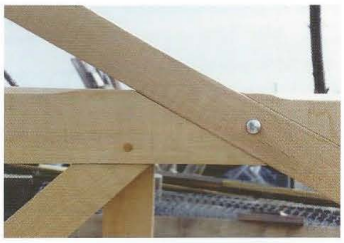
Mortices and tenons were gauged from two square edges or faces on the side the brace would run. The general finish was rough sawn but each member was carefully jointed with saw curfs along the tenon shoulder against the morticed member. A brace was fitted flush to the post and top rail and was generally an inch and a quarter thick to the annoyance of the local mill, who wanted to supply their standard inch board. This would however have produced a structurally inferior and aesthetically unacceptable gate and was rejected! The edges of the top rail were chamfered with drawknife and spoke shave to add a finer touch where the gate was to be handled.

A brace and bit and later the electric drill started the process of cutting joints with timbers laid out on trestles. Heavy blows of the mallet on chisel, made accurate mortices. The pegs or treenails were made by hammering rough-cut dry timber laths, which were dried by the fire, through a steel gauge plate. Linseed oil was used to coat the pegs and helped preserve the weakest point of the joint. Clenched over nails held the intermediate posts and rails together with occasional bolts used for passing braces. The intermediate rails were not rigidly connected to the posts, allowing movement of the more slender members.



D. French fitting the intermediate rails with clenched over nails on a standard 5 bar gate – linseed oil is running out of the freshly pegged post.

Detail of the pegged joint between top rail and butt post with intermediate rails loose fixed in mortices.



A Yeoman gate top rail houses the main brace, intermediate post and passing brace.

The posts were the anchors set in compacted ground and cut from small oaks, sometimes charred from ground level down. Yew (Texus baccata) was said to make 'gate posts of iron' but was rarely used due to availability and expense.

Unassuming perfection

The use of the oak in such a simple and practical way is perhaps one of the strongest and most enduring symbols of mankind's relationship with the land. It is I believe, important to remember the field gate as part of a culture which, until relatively recently depended on the properties of local materials for an economic and sustainable way of life.

What is clear is that the form of the field gate has reached perfection and if it is hand made of oak, just remember some advise from a master carpenter: -
'if you're going to climb over that gate then do so at the hinge!'

An entrance to Brightling Park with the last jowled gate which may be 60 years old or more.

All photographs by:M Hoad

ARE YOU INTERESTED IN SOLVING PROBLEMS ?

- If so read on:- *by Tom Shaw FIWSc*

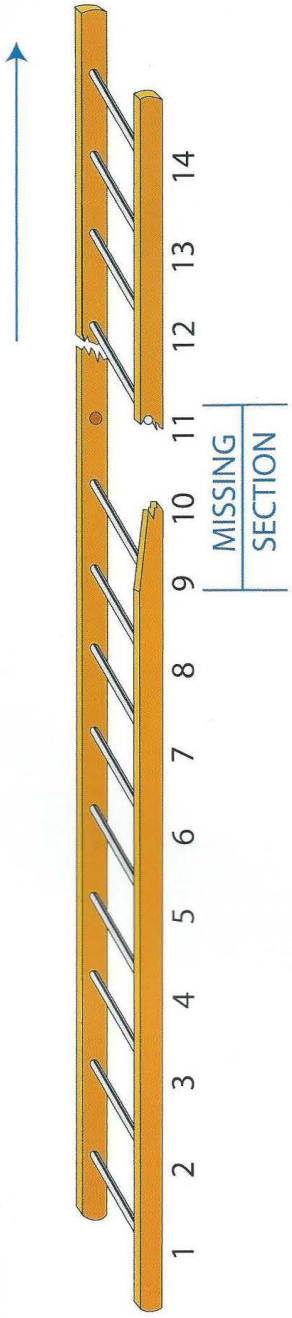


Figure 1.

When an accident occurs and dispute arises over the allocation of blame, the parties involved invariably enlist the services of the legal profession – at no small cost. Whilst the lawyers contribute to the outcome of a dispute they are frequently reliant on the expertise, and experience, of others to enable the presentation of their case.

Timber products have no immunity to accidents in use. It may be of some interest to relate a case, and offer the opportunity for you to apply your knowledge of Timber Technology, in attempting to establish the cause of a component failure, resulting in an accident.

The Scenario
A self-employed Painter & Decorator was working from his extension ladder on a two-storey dwelling when the bottom section of the ladder collapsed, resulting in him falling to the ground and fracturing his ankle. The injury caused him to be off work for approximately three months.

The Ladder - a two section extension ladder with wooden stiles 3.6m x 28mm x 69mm having aluminium rungs 28mm diameter together with 4mm steel tie rods. The stiles were housed (circular mortice) to locate and support the rungs.

At the time of the accident 5 or 6 rungs overlapped giving an extension of approximately 6.4m and set at the recommended angle of 1 out and 4 up.

When the ladder failed the right -hand stile broke into two parts, and the left - hand stile into three parts.

The injured party notified the manufacturers who requested the opportunity to inspect the component parts. Subsequently they returned the broken ladder, but a section of the left-hand stile was missing. Blame for loss was attributed to the carrier.

The missing section was approximately 500mm long, which included rungs 10 and 11. This was unfortunate since this section was to offer the best potential for practical assessment. See Figure 1.

Storage – During the winter, approximately November to March, the ladder was stored in a lock-up garage supported horizontally off the concrete floor. On site it was, where possible, stored under cover on hard standing.

Classification – The Manufacturers stated that the ladder was a class 2 grade, built in compliance with BS 1129 where the load should not exceed 105kg and being suitable for Light Trades and domestic applications.

It is at this point that we will return to the opening question – are you interested in solving problems?

If you are, then assume that you have the broken ladder sections before you, and draft a few notes on your modus operandi.

The approach taken by the author is portrayed on a later page, offering the opportunity to compare notes – but you may find it more rewarding to try to formulate your own ideas first and after that turn to page 13.

Jim Coulson FIWSc, the Institute's immediate past President, taking time out in Slovenia - but not to the extent of missing an opportunty to record a visit to Log!

Company Profile – Crown Timber plc

Anyone visiting the headquarters of Crown Timber for the first time, in the pleasant town of Cirencester, may be in for a small surprise.

When you consider that Crown Timber has sales approaching £100 million a year, having grown from just over £50 million in five years, you might expect to see yards full of timber.

In fact you will find a busy but small head office and a company which employs just 38 staff.

The answer to this conundrum lies around the country at Crown's distribution terminals strategically located at Montrose, New Holland, Ridham and Wicklow in Ireland. This is where you will find well organised stocks of the strength graded softwoods and engineered wood products which are the backbone of Crown Timber's specialist expertise.

For Crown Timber is very clearly focussed on improving the supply chain efficiency of timber distribution and is organised to provide customers with a well planned "just in time" service.

Crown's Mission Statement is quite clear:

"Crown Timber plc aims to be the UK and Ireland's market leading distributor of planed structural timber and engineered wood products and treater of planed structural timber, to the roof truss and timber frame fabricating industries and to timber and builders merchants; and to achieve this through managing the supply chain of these products to offer outstanding value and levels of service to its customers."

This mission has led the company to concentrate on specialist timber product lines, including CLS timber, TR26 graded roof truss timber and engineered wood products. Today, the company is also supplying a growing range of structural whitewood and both redwood and whitewood joinery profiles and mouldings primarily for timber and builders merchants.

Service Focus
Crown Timber plc is focussed on providing a seamless service to customers.

The process starts with a close understanding of each customer's timber purchasing requirements and an analysis of demand patterns and production schedules. The aim is simple: to deliver the right quality and specification of timber in the correct quantities at exactly the right time to optimise efficiency for the customer.

From this starting point, Crown Timber works closely with a small number of carefully selected supplier partners, whether for redwood, whitewood or engineered wood products.

Softwood leaves the sawmills already kiln dried, planed, strength graded, length packaged and fully wrapped.

Shipping to the UK is through one port in Finland and one port in Sweden, via Crown branded vessels, on long-term charter, which ship full cargoes of Crown products.

The engineered wood products are supplied by Trus Joist, a Weyerhaeuser business, who has 17 manufacturing sales operations in North America.

Shipment is either via Mobile in 300 ton barges and carried by the mother ship to Rotterdam for onward passage to the Humberside distribution terminal.

Whether for softwood from Scandinavia or engineered wood products from the USA, the focus is on developing a simple, direct supply chain, with the minimum of transfer and delays.

Once the timber arrives in the UK and Ireland, it is stored at one of four Crown terminals based at New Holland on the Humber, Ridham in Kent, Montrose in Scotland and Wicklow in Ireland. At these distribution terminals, the products are discharged into dedicated Crown storage areas, laid out for complete accessibility, ready to be loaded onto vehicles for onward delivery to customers.

Within the distribution terminals, Crown Timber has also developed a range of added value services, further reducing the burden on customers and improving supply chain efficiency.

Timber Treatment
Timber treatment is available at each of the four softwood distribution terminals from fully integrated double vacuum plants using Protim water-based fluids. Deliveries can vary from one pack to a full load of treated timber. The standard treatment cycle is a double vacuum cycle where the timber is to be used in a dry situation but where a longer life expectancy is called for – typically 60 years.

A double vacuum and pressure cycle is recommended for timber which will be used in timber frame manufacturing or for roof trusses destined for insulated roof voids where condensation might take place. These categories are considered as at "risk of wetting" and may require a stronger treatment cycle.

Pack Saw Facility
Crown Timber has invested in one of the largest pack saw lines in the UK at its Humberside terminal. The line extends to 40 metres and is one of the longest lines ever made by the manufacturers, Holtec.

This facility enables Crown Timber to offer a cut to length pack service, removing another task from the customer's operations, again improving productivity and reducing stock holding.

Looking at Crown Timber's product range in detail demonstrates the strength of the company's offer to customers:

Roof Truss Timber
As a key structural component within a building, roof trusses are carefully designed and manufactured to precise tolerances and standards.

One of the starting points to achieve the necessary structural integrity is the quality and grading of the timber selected by the roof truss manufacturer.

As a specialist supplier in this area Crown Timber is fully conversant with the technical issues and standards required. All 36mm and 47mm TR 26 grade truss timber from Crown Timber is produced in accordance with BSEN519.

To ensure customers achieve optimum efficiency, Crown operates on quarterly contracts to deliver a specific volume of timber over the fixed period. The specification for each delivery is confirmed by the customer just 48 hours before it is required, providing maximum flexibility for the manufacturer customer.

Timber Frame
Crown Timber's CLS product is a factory produced timber component ideally suited to the needs of the modern timber frame manufacturer.

The whitewood product is kiln-dried, strength-graded and planed all round with four eased corners for ease of handling.

As with all Crown Timber structural products it is free of wane, marked continuously along the face, packaged to length with standard pack sizes and well wrapped.

As well as a full range of 38mm finished size CLS dimensions from 63mm through to 235mm, the Crown Timber range also includes studding in 47x75/100mm (finishing 45x70/95mm) and joisting in 47x200.225mm (finishing 44x194x219mm). These thicker products are produced to the same quality, and from the same raw material, as the 38mm sections.

Crown Timber's range of 38mm CLS for timber frame manufacturers includes standard 2.4m stud lengths in 38x63/89/140mm which can also be supplied in exact precision end trimmed (PET) lengths with the trimming operation carried out either at source, or at Crown Timber's Humberside distribution terminal. This PET process can also be applied to joist or rail material if required.

Alternatively, where engineered wood can provide a more appropriate flooring solution for a timber frame building, Crown Timber can turn to its unrivalled selection of Trus Joist manufactured engineered wood products.

Engineered Wood Products
Crown Timber distributes engineered wood products manufactured by Trus Joist of Boise, the world's largest manufacturer of engineered wood products which include: TJI® joists

Trus Joist's TJI® joists are manufactured to resist swelling and shrinking, and able to carry large loads over long spans without sagging or loosening their connection to the plywood and floor finish.

The Silent Floor® System also uses considerable less wood fibre than solid timber joists added to environmental resource efficiency.

TimberStrand® Laminated Strand Lumber
Trus Joist's TimberStrand® Laminated strand lumber (LVL) is made from fast-growing aspen or poplar and can be made into a broad range of products such as rim board, and window, door and garage door headers.

Parallam® Parallel Strand Lumber
Trus Joist's award-winning Parallam® parallel strand lumber (PSL) uses parts of the log that would normally go to waste or into low-grade products. The appealing appearance of Parallam® PSL lends itself for use as interior exposed beams and columns.

Merchant Products

CLS Timber
The consistent and reliable quality of Crown Timber's CLS profile whitewood makes it ideal for studding stock for the timber and builders merchant. It is readily available in the most popular dimensions and lengths. In addition, as Crown Timber supplies the timber frame sector, a range of less common CLS products is also available for rapid call-off.

Type A sawn red/whitewood
Crown Timber's range of these Swedish-produced products meets the criteria of BS5534: 2003, with every piece continuously marked. The range includes five sizes and is supplied bundled and treated.

Structural whitewood
This is a Swedish-produced high quality range, planed with four eased edges and marked continuously along the face of each piece. Graded to a composite C16/C24, but weighted to C24, the product is packaged in small packs of one length and offered treated or untreated. The range is fully PEFC accredited.

Mouldings
Crown Timber's range of redwood and whitewood mouldings and PAR sections is produced by Polkky OY in Northern Finland from the excellent raw material in that region. The range is packaged in small truck-bundles of around 1 cubic metre each and comes with full PEFC accreditation.

All of Crown Timber's Merchant Products can be combined in single deliveries to help the merchant achieve rapid stock turnover, maximising sales from the minimum stock profile.

Supplier Partnerships
One of the most distinctive features of Crown Timber's partnership philosophy is the way it extends through the supply chain to shippers and suppliers. Crown Timber works with a carefully selected number of supply partners. This includes a number of Finnish and Swedish sawmills who are able to supply high quality, graded redwood and whitewood, matched precisely to customers' requirements.

For example, sawmill processes and grading methodologies are reviewed regularly to ensure the out-put from the mill directly reflects customer demand. This ensures repeatable and consistent quality, shipment after shipment, with "no surprises".

In addition, Crown Timber reviews all associated purchasing criteria set by customers, including an assessment of the forest management policies applied to the logs sourced by the sawmills and to the overall environmental performance of the supplier.

Softwood is sourced from well-managed forest areas and suppliers in Finland and Sweden. Each supplier operates within a detailed regulatory and environmental framework.

Crown Timber has also been granted certification by BM TRADA under the PEFC TRADA-TRAK Chain of Custody Certification Scheme.

Crown Timber now has full accreditation and is able to identify on each customer invoice which packs supplied have been certified as holding PEFC chain of custody.

The Future
Looking to the future Crown Timber plc will continue to concentrate on specialist areas of timber distribution, working in close partnership with both customers and suppliers.

Naturally the company will seek to expand the range of products it offers and work with new customers and selected suppliers, but the "day to day" focus on quality products, high levels of customer service and achieving competitive pricing through a relentless quest for supply chain efficiency will remain.

It's a policy that will probably keep Crown Timber's Cirencester Head Office as small and focussed as it is today but, around the country, the level of service provided to customers will continue to grow!

Howarth Timber Student Visit to Sweden

By Peter Kelly AIWSc

In October 2002 a group of students from the Howarth Timber Group signed up for the Institute of Wood Science Certificate course, being tutored 'in-house' by the companies Training Manager, Peter Kelly, with all seven successfully completing the course and final examination in March 2004.

From left to right, Catherine Creasey (Sales Midlands) Claire Anderson (Sales Group) Steve Hotchin (Yard Manager) Keith McDonough (Assistant Manager) Mark Turner (Sales Representative) Jonathan Gunn (Transport) Kurt Coupland (Arbordeck Sales) Peter Kelly (Training Manager)

The majority of the module workbooks and projects were completed by the students in their own time following formal structured sessions and regular tutorials. Following their hard work and achievements Andrew and Nicholas Howarth rewarded the group with a trip to Sweden to visit one of the company's suppliers, the Setra Group.
The group flew from Luton to Västeräs on 14th February 2005, where they were met by their host for the trip, Peter Andersson, before driving north to their base at Sätra Brunn in the Bergslagen region.

The first part of the trip was to the Heby Sawmill which deals exclusively with whitewood (Spruce) grown in this region of the country. The sawmill tour was preceded by three presentations:

- Pontus Freiberg, Supply Manager Bergslagen Whitewood, gave the initial presentation detailing the structure of the Setra Group and sawn products.
- Peter Andersson, Product Manager, Heby & Hasselfors Sawmills, gave a presentation on the various sawn product groups, geographical markets, product units – sawmills, customer focus and distribution network.
- Olle Modin, Sawmill Manager, then gave a presentation on the Heby Sawmill, detailing the sawmilling and kiln drying operations carried out on site.

Each of these presentations were interactive with the group asking numerous questions throughout, allowing wider discussion on all aspects of the Setra Group, sawmilling and forestry practice, including the increasing important aspects of responsible forest management practice, sustainability and certification practice and procedures.

The group was then given a detailed and extensive tour of the sawmill by both Olle Modin and Peter Andersson. This allowed the group to see the detailed working practices of the sawmill at first hand and allowed questions to be asked not just of Olle Modin and Peter Andersson but by the employees working in all areas of the Heby sawmill.

The tour was conducted in a sequential sequence, starting with the delivery of the raw materials (logs) from the forest. Both the delivery and log sorting were observed and the working practice of the log storage yard explained.

The next stage was the debarking and optimization of the logs for production, where two lines were running simultaneously. The group then followed the saw lines through the mill where they were able to stop at any point to see the operations in more detail, ask questions and talk to the employees operating the production process.

During the tour the group was able to observe the sawn products be commercially graded both manually by the sawmill employees and by the increasingly automated process of Finscan (by camera). Whilst the operators manually grading the sawn products demonstrated high levels of skill they only stayed on the grading lines for a maximum of 30 minute at a time due to the high levels of concentration required. Whilst there are still the need for these manual graders for certain products coming off the production lines, the Finscan has proved to be very accurate and approximately 20 times faster than the manual process.

The group was also able to observe the kiln drying, the storage and distribution operations. The Heby Sawmill has the largest storage shed in Sweden which was constructed with whitewood Gluelam beams manufactured by the Setra Group. Ongoing site development allowed the group to observe the new kilns being constructed out of these whitewood Gluelam beams towards the end of the site tour.

The second part of the trip was a visit to the whitewood forests of the Bergslagen region. Peter Andersson accompanied the group which was lead for this part of the trip by Patrick Hellblom, Forest Harvesting Co-ordinator, Mellanskog AB.

Whilst in the forest, Patrick was able to give a detailed running commentary of the forest operations taking place and introduced the group to the individuals working out in the forests, harvesting the raw materials. He was accompanied by one of the State's Forest Inspectors who was able to give further insights into the detailed work carried out by the Inspectors.

They were able to show the group a detailed 'Forest Management Plan' of the forest area being visited and explain to whole process of sustainability and ecological forest management practices. Patrick Hellblom pointed out how the forests area they were currently working in was well managed, protected and controlled so that the whole process of regeneration took place naturally, allowing the continued cycle of harvesting whilst maintaining a healthy balance and allowing the forest to continue to support the natural flora and fauna of the region.

The group was able to observe the harvesting operation being carried out with the use of a 'feller buncher'. The machine had an inboard computer detailing the raw material requirement and log sizes required by the sawmill. This allowed the operator to select the appropriate trees for felling and sort the logs by size and length

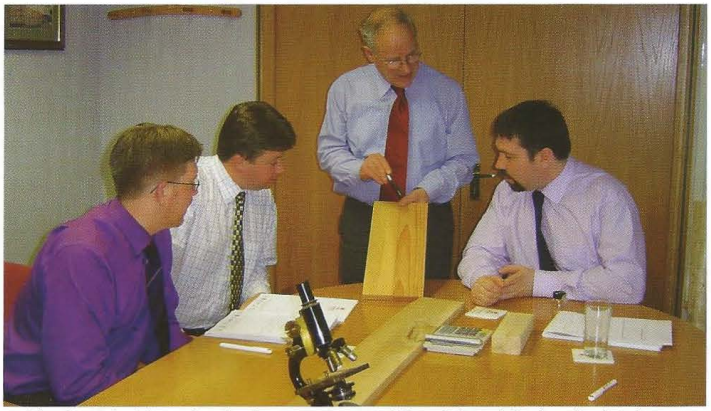
when felled. The operator allowed members of the group into the cab so that the process of tree selection, felling and conversion into the required log lengths could be observed at first hand. The forest visit was concluded with a long walk to another area where the log extraction process could be observed using modern techniques and machinery.

The final part of the visit consisted of a recreational evening during which all members of the group were able to take a traditional sauna prior to an informal dinner and drinks which went on well into the night. However, everyone was up early the following morning for breakfast and the drive back to Västeräs for the flight back to Luton and the inevitable return to work the following day.

Log extraction in the Bergslagen Whitewood forests

Training News from Crown Timber plc

A study group at Crown Timber plc is one of the first to embark on the new IWSc Certificate Core Module, Timber Technology. In addition, after their examination on this component of the course they have chosen to study a comprehensive selection of the optional modules to complete the Certificate Award. The modules chosen by the individual members of the group include: Softwood, Moisture in Wood and Timber Drying, Carcassing and Strength Grading, Joinery and Appearance Grading and Timber Trades Practice. The choices reflect their individual interests and professional development and also are an example of the way that the new course structure can be conveniently tailored to meet both the needs of the individual and the company.



The first tutorial session for the course, seated from left to right, Lee Barker-Jones, Kevin Peters and Roy Graham. Explaining the growth features of a softwood is the tutor David Woodbridge FIWSc. Picture by Jim Lumsden.

Investing In Skills Today For A Better Timber Industry Tomorrow

By Terry Edgell, AIWSc, Director, Premier Forest Products Ltd

Spring is traditionally a time of new beginnings and change, and Spring 2005 is especially pertinent for Premier Forest Products as it marks our company's twelfth anniversary, and the launch of Premier's employee-training scheme.

This year will see three of our junior members of staff attempting to gain the Institute of Wood Science's (IWSc) Foundation Course Certificate whilst keeping up the day job. As an IWSc Associate member and someone who has studied timber technology at degree level, I know only too well how demanding continuous professional development can be, which is why Premier is dedicated to supporting these staff through mentoring as they combine coursework and assessment preparation with paid employment.

Some may wonder why our company would willingly create more work for itself and its staff - after all, Premier Forest Products is rapidly growing, so our employees have more than enough work to do. However, myself and the two other Directors at Premier, Nigel Williams and Dilwyn Howells, are committed to the timber industry in its entirety, not just our own company - Premier Forest Products is a member of the Timber Trade Federation (TTF), Nigel represents our region to the TTF, and Dillwyn is South Wales Chairman of the Timber Trade Benevolent Society. We are therefore acutely aware that our industry is suffering from a skill's shortage, and we realise that it is we timber companies who need to tackle this head-on and grow the skills of junior staff so that this shortage is reversed.

Completing the Foundation Course will give our younger employees an improved and comprehensive knowledge of timber products and wood as a material, and provide them with the skills needed to progress their career within the timber industry. As well as this technical know-how, the course also focuses on marketing competencies, and these two disciplines are essential to master in today's competitive business environment.

Of course, while our staff members are studying, Premier will benefit from the employee's improved skills and greater understanding of the industry they work in. Participation in the course also demonstrates a high level of competence and commitment to the timber trade. An employee that cares enough about their career to learn about the properties associated with different timbers can better promote that product to customers, and this makes them an invaluable asset, whether their area of work is sales or purchasing, for example.

The skills the trainees learn on the Foundation Course will set them up for further vocational training, including the possibility of studying the newly revised and re-modelled IWSc Certificate Course, and a long and successful career in the timber industry, and will remain with them whether they stay at Premier or eventually move elsewhere. Participation on this course will consequently benefit our employees, Premier Forest Products and the timber industry as a whole. It is a win-win-win situation, and one we would encourage other timber traders to follow – an investment in staff training is an investment in the prosperity of your business today and the timber industry for the future.

Hot technology for rapid drying

By Justin Peckham, Managing Director of Woodtech Machinery

During the revisions and republishing of the Institute's Certificate Course module on Moisture in wood and timber drying, help was at hand from a number of specialist sources, one of which was Woodtech Machinery. From this source we were made aware of the developing collaboration, in both technology transfer and marketing, between Windsor Engineering in New Zealand and Nardi in Italy, both of whom are established kiln manufacturers.

Justin Peckham's article explains this collaboration. It provides continuing coverage on the advances in high temperature processes for timber worldwide and follows on from that of Duncan Mayes of StoraEnso, on ThermoWood®, that appeared in the previous issue of Wood Focus

Windsor Engineering of New Zealand has been at the forefront of developing methods for high temperature kilning of native Australasian species and is now exploring the potential for this technology to speed up the drying of European softwoods

Halving the time it takes to kiln dry softwoods is the promise held by drying techniques used in Australasia and currently under trial in Europe.

Last year, Italian kiln manufacturer Nardi announced a marketing collaboration with the Windsor Engineering Group of New Zealand. A key benefit of the agreement is the opportunity it offers for technology transfer. The Italian company's expertise covers drying of softwoods and hardwoods, heat treatment of pallets to ISPM15 requirements and steaming timber, such as beech, for aesthetic effect. In New Zealand Windsor Engineering gains particularly from being able to offer Nardi's hardwood drying knowledge and systems to complement its existing services that are primarily aimed at the softwood industry.

For the UK/Irish agent, Woodtech Machinery, the partnership provides a link to southern hemisphere developments in kiln drying, and in particular to add high temperature drying methods to its product portfolio.

Conventional kilns run at between 40degC and 80degC, with UK practice being to keep the temperature below 60degC – taking, for example, around 100 hours to dry a charge of 47mm Sitka spruce starting from about 110% mc (the range can be 80 - 180%) and drying to 18%. The upper limit of 60degC is critical, since at this level the wood becomes prone to twisting, which is the main cause of degrade for spruce. Above 80degC the wood 'plasticizes', at which point water can be removed with no degrade. Using higher temperatures speeds up drying time, but the challenge is how to reach these higher temperatures without the timber becoming damaged as it passes through the 60degC mark.

The New Zealand company has developed three ranges of kilning systems, operating at 80-110degC (ACT), 120-160degC (HT) and 160-220-degC (UHT) - the latter drying a charge of pine in an eight-hour cycle. The problem of potential degrade at these temperatures is overcome by sophisticated control over the balance between dry bulb temperature and wet bulb temperature inside the kiln. Their method comprises three phases: pre-steaming; drying; and conditioning. Steaming in the kiln is achieved using a low-pressure steam bath rather than spray lines. This allows a saturated steam environment to be created rapidly inside the chamber, so that the wood temperature can increase without drying taking place.

When hot air comes into contact with the timber during kiln heat-up, any existing degrade such as checking can worsen due to the surface drying before the core. However, if steam is condensed on the hot timber the surface moisture content rises, which lessens the degrade by relieving the stress on the surface. Condensing steam also raises the temperature of the wood, and when this exceeds 80degC plasticization occurs - which 'relaxes' the wood and further reduces stress. In this plasticized (or relaxed) state wood is not susceptible to twisting or checking, and water can be removed with no substantial risk of degrade. Once the required dry bulb temperature in the kiln has been reached, the wet bulb temperature depression can be increased - and only at this point does the wood start to dry. The final conditioning process, which incorporates a steam generator, relaxes the stresses caused by drying and thus further reduces the risk of degrade--always an important outcome to strive for.

The UHT schedules used in Australia are drying 42 - 53mm thick *Pinus radiata* and *Pinus elliottii* (Slash pine) from 120 - 140% down to 11%. Two chambers are used for this process; a drying kiln and a conditioning chamber. The drying takes 4 hours and then the timber is automatically moved into the conditioning chamber for a further 3.5 hours for conditioning and cooling.

High temperature drying is the main process used for drying radiata pine. Windsor Engineering's experience covers this and many other plantation softwood species found in the southern hemisphere. This suggests that the technology could also be used to dry British grown Sitka spruce which is fast-growing and which is known to require careful drying to avoid, in particular, distortion.

As a result of the various discussions that have been held between the interested parties, both in the UK and overseas, trials are being set up in Italy, using high temperature drying technology from New Zealand to dry UK-grown Sitka spruce and determine the time-savings that can be achieved. UK mills are supplying the wood for the trials, which will be overseen by BRE. The results of these trials will be of great interest. Windsor Engineering are confident that they can reduce drying times for UK and European softwoods by 50% or more without jeopardizing quality levels.

Windsor kiln. By courtesy of Windsor™ New Zealand

SOLVING PROBLEMS - Continued: -

In any investigation where law, injury, or dispute is involved, reference to relevant standards is useful, if not essential. At the time in question the standards most apposite to our case were – BS 4978 Visual Strength Grading of Softwoods and the standard related to ladders BS 1129. This standard advises against the use of load testing, therefore assessment must be by visual means.

The principles of visual grading are defined in BS 4978 where consideration is given to factors affecting strength, most commonly referred to as defects. The defects include:

*knots *slope of grain *rate of growth *fissures (splits) *moisture content *tolerances (sizes) wane, worm, rot.

* Material requirements of these are also detailed in BS 1129 (ladders). It can be seen that several ofboth standards coincide and, following examination, only four justified further consideration.

1. Fissures – these need to be fairly extensive to have a measurable reduction on strength. Apart from small surface checks, no fissuring of any significance was present.

2. Moisture Content – whilst recognising that strength reduces with increase in M.C. it is reasonable to assume that manufacturers would have calculated design values appropriate to external climatic conditions.

3. Rot – surface weathering was evident, together with dirt, and paint, which would seem normal for the purpose used. One side effect of weathering and splits is the potential of spore migration and development. However, none was evident in our samples.

4. Slope of Grain – most of you will be aware that sloping grain is not readily evident on the surface, even to the experienced eye. Therefore, a grain detector must be employed – BUT ON WHAT?
Testing revealed that the broken two-part stile displayed some wandering grain, but did not exceed the required 1 in 10. The three-part stile also displayed acceptable wandering grain within the limits, until we reach – yes, you have guessed it – the missing 500mm section! So where do we go from here?

It was decided to produce from the available pieces a facsimile of the missing part:-

a) illustrating the whole 500mm length figure 2; and
b) a full size projection onto a 69mm wide length of board figure 3.

The full size projection was transferred in accurate detail from the surviving stile sections using a series of ordinates from the edge to the lines of grain achieved from the grain detector. From the lines of fracture at A and B it is important to note that at both these points the line develops downward curvatures, which must inevitably continue and meet. The pattern is a sweeping curvature with resulting slopes.
Some conjecture is necessary here regarding the angles of slope but, even viewed conservatively, the evidence appears compelling in concluding that the slopes are in excess of the 1in10 permitted in BS 1129.

So why did the ladder fail?
In this situation, deprived of substantial evidence, we are forced to extrapolate. The localised slope of grain contributed, and, mindful of the fact that 1in10 will afford around 80% strength in bending, a slope of 1in5 reduces the strength to below 60%. It is significant that fracture occurred at the rung locations A and B, where the stile section has been reduced by circlar mortice housing to accommodate them.

Clear grade stock is normally used in ladder construction, but, as previously stated, sloping grain is not readily evident on the surface. Grain pattern is a feature of growth rather than of conversion. A possible explanation could be the influence of a large nearby branch – you may have other suggestions?

How did you tackle the problem? Successfully I hope. However, we will hand our conclusions to the Legal Boys, who will doubtless derive a few benefits from the exercise.

Letters to the Editor

Jerry Wilson AIWSc of Sylvawood writes:

Reading Wood Focus issue 11, I could not help but notice that the article on ThermoWood® states under key characteristics that there is a decrease in surface hardness.

However, on checking the ThermoWood handbook, I see there is a section which suggests that surface hardness is in fact increased.
(Reference Section 4.2.3 Hardness)

13 December 2004 Cardiff

To this the author of the article, Duncan Mayes of StoraEnso, replied on the 17th December:

Yes this is the case, there has been a change in opinion since the original ThermoWood Handbook was produced in 2002. In original tests carried out by VTT it was shown that there was very little effect on Brinell hardness after ThermoWood treatment - even a slight increase. However from our own studies and testing this year we have found there to be a slight decrease in surface hardness when testing using the Brinell method. I will bring this issue up with the Finnish ThermoWood Association (FTWA) and get a wider opinion.

This wider opinion was reached and Mr Mayes now reports as follows:

We have discussed the results of Brinell hardness in the FTWA board meeting and it was concluded that our more recent results mirror the results of some other producers - so we are in a position to agree to the text I wrote earlier (see above) stating that there is a slight decrease. In reality this is logical because one of the main effects on Brinell hardness is the density of the material - as the density of softwood decreases due to the ThermoWood process then so should the Brinell hardness.
Duncan Mayes StoraEnso

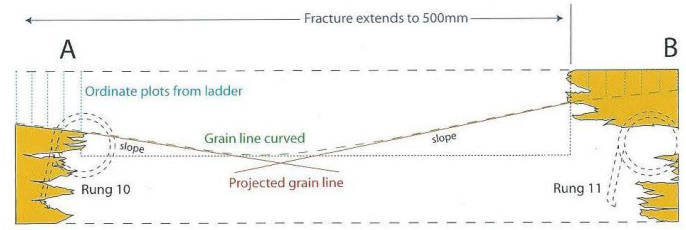


Figure 2.

Figure 3.

News and views from the Director

By Jim Lumsden MCIPD; MIWSc

Rise to the Challenge !

It is a well known saying that membership is the lifeblood of any membership organisation and in this the 50th anniversary year of the Institute it is perhaps appropriate that we are conducting a recruitment drive in an effort increase our numbers.

Being a member of the Institute of Wood Science will be a valuable asset in an individual's professional career and ensure they get the recognition they deserve. All grades bring a comprehensive range of member benefits and services and provide opportunities for continuing professional development.

If each of our members could help recruit just one new member, then we could spread the word and double our membership in a matter of weeks. Do you know of colleagues who might qualify and would benefit from membership? If so, why not invite them to apply for the appropriate grade. In addition to **Certificate, Associate** and **Fellow** grades there are three further grades providing membership for those who did not have the opportunity to achieve formal IWSc or equivalent qualifications.

Ordinary member grade is open to any applicant and requires no formal qualifications for entry. **Member** Grade is open to individuals employed in the timber and allied industries with ten or more years experience with at least three at in a senior position. Members can use the designatory letters MIWSc; **Student** grade is open to anybody who is studying for a qualification in timber or equivalent.

All members receive the Journal and Wood Focus magazine and are entitled to attend meetings and conferences organised by the Institute.

Thank you for your continued support and I do hope you will feel able to help us by rising to the challenge.

UKW (UK Woodchain)

A white paper was published recently proposing major new changes in the education provision for 14-19 year olds, with vocational training being highlighted as very important. A consultation exercise is now being started concerning the way post school qualifications are to be structured, involving a credit-based framework of awards that meet employers' requirements. The plan is to have the framework in place by 2007.

These are signs of fundamental change that will bring opportunities to the industry as a whole: we can influence, even direct, the way education and training provision connects with businesses at every level and how these connections actually support career development. UKW is determined to take these opportunities and can assist by making sure it communicates observations about career pathways, education and training supplies, business needs and so on as they occur.

The Institute is well placed with the launch of the new Certificate Course modules that can be used as stand alone learning materials or as underpinning knowledge for trainees following National Vocational Qualification routes or other approved national training programmes.

THE DOORWAY
www.thedoorway.org.uk

Welcome to 'The Doorway'

On 23rd March the Timber Trade Federation launched a website designed to attract new entrants to the timber and related industries. www.thedoorway.org.uk was put together by the Federation's Education, Training & Careers Committee with input from across the timber sector, from growers and sawmillers through to end product users in carpentry, joinery and timber engineering, and constituent jobs ranging from designing timber buildings to timber engineering and supply chain auditing.

www.thedoorway.org.uk features a list of job options, leading to career profiles of young people currently fulfilling those roles. The job options covered in the launch phase are: Architect (Timber specialist), Carpentry & furniture-making, Charity NGO, Education, Electrical Engineering - Sawmilling, Engineering (Timber buildings); Environment (Responsible purchasing); Finance, Forestry, Human Resources, IT (Information Technology), Joinery, Marketing, Public relations, Purchasing, Sales, Shipping, Supply Chain Auditing, Warehouse operations, Wood machining, Yard assistant. Further profiles will be added as the site expands.

The website also features an initial selection of career route maps giving suggestions for qualifications. These will be extended over the coming months. TTF Director General, John White, comments: "At a time when people are making career choices earlier than ever its vital that we make available the full range of interesting careers and jobs in our sector more widely known. This new website makes a great contribution to that effort and ensures that we continue to attract bright and energetic individuals into our industry."

The website is hosted and sponsored by Timber Trades Journal. "Reaching out to young people is essential if our sector is to attract good quality recruits capable of running the many different types of organisation which make our industry function. We must also compete on the same footing as other industries which makes a website an essential tool for today's 'wired' generation," says editor Mike Jeffree.

TTF ETC Committee chairman, Rob Simpson of SCA Timber Supply, is intent on promoting the site: "Our next task is to promote the site to schools, colleges, universities and careers advisers, and this is something in which TTF members and indeed everyone across the sector can participate."

The Institute welcomes...

We are pleased to welcome the following additions to the list of corporate members:

BROOKS

A division of Wolseley plc since September 2004, the Brooks Group operates from nineteen outlets throughout Ireland – North and South, offering an extensive range of timber, wood products and building materials from convenient locations. The combination of highly trained staff and over 200 years experience position the Group as one of the leading suppliers in Ireland.

Canada Wood
Produits de bois canadien

Canada Wood is a collaboration between Canadian wood products industry associations and government for the creation of a single global representation in overseas markets providing specifiers with a reference and contact point to wood products from the world's foremost sustainably managed forest resource.

The Canada Wood UK office is supported by the Canadian Plywood Association, Canadian Lumbermen's Association, Council of Forest Industries, Forest products Association of Canada, Quebec Wood Export Bureau and Western Red Cedar Export Association; the office also provides representation in the UK for the Maritime Lumber Bureau, Ontario Lumber

Manufacturers' Association, Quebec Forest Industries Council and the National Lumber Grades Authority.

BUILDBASE

Founded just nine years ago, Buildbase has grown from a single £10m depot in 1996 to a £320m company with a network of 105 builders' merchant branches across the UK. Buildbase describes itself as 'the merchant with a difference' because it combines the best of both independent and national trading. Its branches are often family businesses, which are well respected by customers for the excellent product knowledge and expertise of staff. Last year Buildbase was the first national merchant to gain FSC-certification for all its branches. The company was also named best national builders merchant in the industry's 'Awards for Excellence' 2003. Buildbase is the principal builders merchants trading arm of Dublin-based Grafton Group plc.

CAPRICORN TIMBER

Capricorn Timber began trading in January 1993. Since then the business has gone from humble beginnings in the corner of another timber importer's yard to a £6m turnover company employing 32 staff.

From the outset, the business, based in Uttoxeter, has always specialised in North American and, in particular, Canadian clear grade softwoods, as well as hardwoods from all corners of the globe. But clear softwoods have always been the predominant stock item, accounting for approximately 70% of the company's stockholding.

From quite early on it became apparent that there was an undercapacity in the trade for supplying and machining special profiles in clears and hardwoods, so a fully-equipped planning and sawmill was installed and opened in 1995, combines with a 56,000 square foot storage warehouse. The mill now accounts for 45% of the company's turnover.

Capricorn Timber has a fleet of 17-tonne, curtained-sided lorries and offers a prompt delivery service to all parts of the country and, unlike some of its competitors, the company is happy to supply small quantities as well as large. The company has been accredited with FSC, CSA, PEFC, SFI and MTCC chain of custody certification.

IGGESUND TIMBER
A MEMBER OF THE HOLMEN GROUP

Iggesund Timber Sales Ltd, based in Hertfordshire, is the sales and marketing arm of Iggesund Timber AB in UK, supplying Swedish redwood to the specialist joinery sector as well as the traditional furniture manufacturers.

Iggesund is part of the Holmen Group, a publicly quoted company on the Swedish stock market and can trace its roots back as far as 1685 to the forests of Sweden.

Iggesund sawmill is located on the upper shores of the Baltic with capacity for producing 300,000 cubic metres of redwood coupled with technologically advanced stainless steel kilns that dry to a specially low moisture content using the patented RELAX® kilning processes and producing brands such as Monolit®.

By concentrating exclusively on redwood for its superior qualities, Iggesund aim to give their customers a superior product keeping waste to a minimum when they convert timber into finished product.

From forest to sawmill to kiln to customer, continuing investment in new systems, equipment and of new ideas help to keep the company at the forefront of sawmilling technology.

Wood Science for all !

Celebrating our Jubilee this year, the Institute has launched its new Certificate Course - with a structure to suit present training needs by the proven method of distance learning.

The new Certificate Course approach is based on topic specific modules of which a Core Module on Wood Technology is a compulsory component for those students seeking to gain the Institute's CMIWSc Qualification. Alongside the Core Module are a series of Optional Modules. Each is complete in itself and can be taken individually by those wishing to gain knowledge in a specific area of work but without the desire to undertake the full Certificate Award Course. The new modules are in full colour with illustrations and diagrams selected to enhance the learning experience. Each contains almost all the necessary information to complete the work, although a good textbook is also needed. The optional modules cover Technology, Resource, End Uses and Commercial, within which such topics as Moisture in Wood, Carcassing and Strength Grading, Joinery and Appearance Grading are covered.

For those who want to achieve a professional qualification or need a broad understanding of wood science, technology and the use of wood as a material, the IWSc Certificate Course provides an ideal opportunity to meet all needs.

Examination Dates in 2005

The new Certificate Course structure requires students to take an examination on completion of the Core Module. To provide maximum flexibility on when students start the programme, there will be four exam sittings per year.

For 2005, the exam dates will be on the third Friday in May, August, and November and in 2006, on the third Friday in February, May, August and November.

Please also note the following:
The last sitting of the certificate in its pre-revision form will be on Friday 16 September 2005.

WA
TheWoodAwards
2005

The Institute of Wood Science will, for the second year running, be a sponsor of the Wood Awards. Entries for this year's event close on 20th May and anyone associated with the design, construction, installation or commissioning of joinery and wood structures in the UK can enter. Any project, small or large, such as the 2004 short listed Black Rubber Beach House by Simon Conder Associates in Finnish wisa-spruce plywood, and the Gold standard of Hopkins' Norwich Cathedral Visitors' Centre in English oak supplied by Whitmore's Timber, must be entered by 20th May, as already mentioned above.

The four main categories - Commercial & Public Access, Private, Structural, and Conservation/Restoration - will recognise excellence in wood and work in buildings completed between 21st May 2004 and 20th May 2005. Three special awards (Small Project Award, Innovation Award, and the Best Use of British Wood Award) will also be made.

The 2005 shortlist will be announced and exhibited at 100% Detail at Earl's Court from 22nd September, and the award winners will be announced at The Wood Awards Party at Carpenters' Hall in London in October.

Call 07957 730707 for more information, or visit www.woodawards.com for full conditions of entry, and entry forms.

The Institute is pleased to announce that during the period since the publication of the Spring 2004 issue of Wood Focus the following have been elected to Fellowship.

James C. Coulson

Immediate Past President of the Institute.

Jim has been a member of the IWSc Council of Management since the mid-1980s.

Founding Director of Technology For Timber Limited (TFT), an independent consultancy practice that provides Technical and Training Solutions for the Timber and Construction Industries.

Elected a Fellow of the Faculty of Building in 1986.

A member of UK Wood Committee of ICOMOS (the International Council on Monuments and Sites) for 20 years, and last year elected onto the ICOMOS UK National Executive Committee.

Since 1991 an accredited timber consultant with UNIDO, registered in Vienna for UN consultancy projects.

Richard P. Vlosky

Professor, Forest Products Marketing at Louisiana State University.

Director, Louisiana Forest Products Development Centre and Program Leader, Forest Products Program.
Extension Specialist - Louisiana Cooperative Extension Service, School of Renewable Natural Resources.

Leader of the UN Team of Specialists on Timber Markets and Marketing in Geneva.

PhD – 1994 – Pennsylvania State University – Wood Products Marketing and Ph.D Studies 1985-1986 – University of Washington.

Brian J Norris FIWSc – Reflections on the First 50 Years of the IWSc.

I have gained much from the Institute. Apart from knowledge and long-standing friendships, it also caused me to witness the burning-down of a cinema.

On returning to the timber trade in 1957 after two years with the RASC, my employer, R.P.Richards & Co Ltd of Aylesbury, sent me to Sweden for the summer and then on a TDA course run by Harry Richardson.

This was when I first heard of the Institute (then two years old) and, having no relevant qualification, decided to enrol for the three-year TDA Certificate course at High Wycombe College.

Under the guidance of John Brazier, assisted by Harry Wynands, and later Doug Patterson, I was introduced to the unknown (to me) world of tracheids, parenchyma, tyloses, etc.

A few years elapsed before there were sufficient students to justify an Associate exam course, which I completed with several others, including Mike Edmondson (later a colleague) and Bob Plumridge.

My first conference was at Stratford many years later (I think 1988), which I was encouraged to attend by Chris Lorenzen. Since then, Heidi and I have only missed one or two years,

In 1993, Maurice Holloway (then Director and my former Chairman at Baynes (Reading) Ltd) persuaded me to join the Membership Committee, which I later chaired for six years.

I have many happy memories of my 47 years and wish the Institute good fortune and continued success in its next 50. I regret that space does not permit me to mention more of my Institute friends by name.

The cinema was at Princes Risborough on my way home from Wycombe to Aylesbury on a winters night in the early sixties.

REGIONAL CONTACTS

For information on branch and/or regional and overseas activities, the contacts are:

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Scotland - Andrew Gibson AIWSc (01416 321299)

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