

Maximum Timber

Continuing Professional Development for small to medium architectural practices

Glasgow Friday 7 October 2011



Wood for Good

Architects throughout Scotland can now benefit from Wood for Good's custom-designed Continuing Professional Development programme. Delivered by Edinburgh Napier University's Forest Products Research Institute, the timber-related topics on offer correspond to the RIBA's Core Curriculum structure for CPD, thus enabling architects to benefit from objective, independent research in ten areas of the Curriculum's 31-subject syllabus. The programme material has been devised to provide objective, independent information at the 'detailed knowledge' level - one of three categories recognised by the Curriculum.

Wood for Good and the Forest Products Research Institute both recognise the difficulties small to medium sized architectural practices in Scotland have in accessing and affording quality CPD and the good news is that no charge will be made to practices wishing to attend Wood for Good CPD events. Full details of how the Wood for Good CPD programme can be accessed will be explained at the launch event to be held at SUST, the Lighthouse, 11 Mitchell Lane, Glasgow G1 3NU on Friday 7 October 2011.

The intensive half-day session will cover an inter-related range of subject areas as well as providing information on how architects can benefit from involvement with a major new EU-supported project - the Wood Products Innovation Gateway - that will also be launched at the same event. Not only will individual participants receive a CPD certificate of attendance at the session, they will receive at least three important reference publications related to the launch event topics for inclusion in their practice libraries. Maximum CPD indeed.



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The Wood Products Innovation Gateway

The Wood Products Innovation Gateway (WPIG) is a new initiative aimed at developing a range of new added value products, processes and construction systems from Scottish-grown timber. The £1.5m three-year project is supported by the European Regional Development Fund, Scottish Enterprise, Forestry Commission Scotland, ConFor, Wood for Good and Edinburgh Napier University's Forest Products Research Institute.

Over its life, the project is intended to engage with more than 600 Scottish-based SMEs with a view to identifying ideas that can be taken through full research and development to commercial reality, with upwards of 30 new research networks and an equivalent number of commercially viable uses for Scottish grown timber targeted.

The UK currently imports around 80% the timber it uses in construction, furniture and other products, whilst much of its home-grown timber is put to low value uses such as potato boxes, pallets and pulp. With a view to making inroads into this substantial trade and resource imbalance and to benefit the Scottish economy, the Wood Products Innovation Gateway (WPIG) aims to raise the value of the forest resource in Scotland by bringing to market new products, processes and construction systems with potential to create jobs and increase the turnover of participating SMEs. How companies, consultancies and practices can become involved and benefit from this programme will be outlined in this introduction.



Properties and Uses of Sitka Spruce

Sitka spruce is the main conifer species grown in the UK and the commercial wood products industry is primarily based on this species. Wood from Sitka spruce is sawn into timber for use in construction, pallets/packaging and fencing and is also used in the production of paper and panel products. A variety of circumstances have hitherto limited its use in domestic construction, however, amongst which has been lack of knowledge of the wood's properties and the technical performance of products made from it.

Over the past eight years, the Strategic Integrated Research in Timber project (a partnership of Edinburgh Napier University's Forest Products Research Institute, Glasgow University's Department of Chemistry and Forest Research's Timber Properties Group) has investigated every aspect of the UK's Sitka spruce resource to determine the genetic, forest management and environmental issues that affect its quality and the ways that each of these can be improved upon in the future.

The results of this and other research have now been published. Written for architects, engineers, wood processors and end users of wood products, Wood properties and uses of Sitka Spruce in Britain provides the information necessary to better understand the physical and mechanical parameters that govern the design and construction potential of this particular species. This presentation also provides an overview of the end products currently manufactured from Sitka spruce and those that might conceivably be produced in Scotland in the future.



Research Report

Wood properties and uses of Sitka spruce in Britain

Sustainable Construction Timber – sourcing and specifying local timber

In most construction projects the building contractor is ultimately responsible for purchasing decisions although they are usually guided by a specification written to accompany the design drawings supplied by the architect or other specifier. Many specifiers use a commercial master specification system such as NBS building to help to accurately describe the products required in a building and how they are to be installed. Master specification systems are, by their very nature, however, quite general, especially in cases where the product area concerned is undergoing rapid development and innovation.

Timber construction is a good example of this in that it has changed considerably in recent years and inevitably proprietary specification systems do not always reflect current practices or product availability. Indeed, some make little or no mention of local timber issues and at a time when environmental concern and embodied energy questions are to the fore, architects and other UK specifiers need sound information on local timber products and sourcing that can be used alongside, or as an alternative to, the guidance given in master specification documents.

This introduction to the subject explains why local timber sourcing is important and reviews the range of timber species and products currently obtainable in the UK. The ways in which local sourcing can be achieved within a construction project are also explored.

Sustainable Construction Timber

Sourcing and specifying local timber

Ivor Davies

Forest Products Research Institute, Edinburgh Napier University
Prepared on behalf of Forestry Commission Scotland

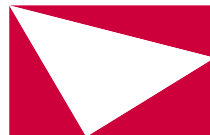


Cross laminated timber – manufacturing from home grown material

The key to cross laminated timber's emergence and a competitive construction product has been its capacity to transform relatively short lengths of timber into structurally sound, solid wall technology capable of fast erection up to – and now beyond – several storeys in height.

Interest from UK architects lies in a number of inter-related factors – the drive for 'zero carbon' homes and the consequent higher requirements for airtightness and acoustic and thermal insulation; increasing emphasis on modern methods of construction (MMC) and the economic benefits of large scale pre-fabricated panel manufacture; the reduced assembly time of a load-bearing, modular product that has only 20% of the weight of concrete and whose size is limited only by available transport methods; and, being self-supporting in two directions, the ability to construct walls and floors without the need for additional structural framework.

With no UK manufacture, the product is currently imported from central Europe and Scandinavia. The Holy Grail, however, is to produce versions of CLT here in the UK from home grown timber, thereby adding value to the domestic forest resource, but hitherto no one has taken on the research and development process necessary to bring UK-made CLT to commercial reality. This has changed with the arrival of the Wood Products Innovation Gateway and, with the first CLT press now installed and up and running in Scotland, a full FPRI-led R&D programme is now underway. This presentation tells the story of the work so far and of the anticipated end results.



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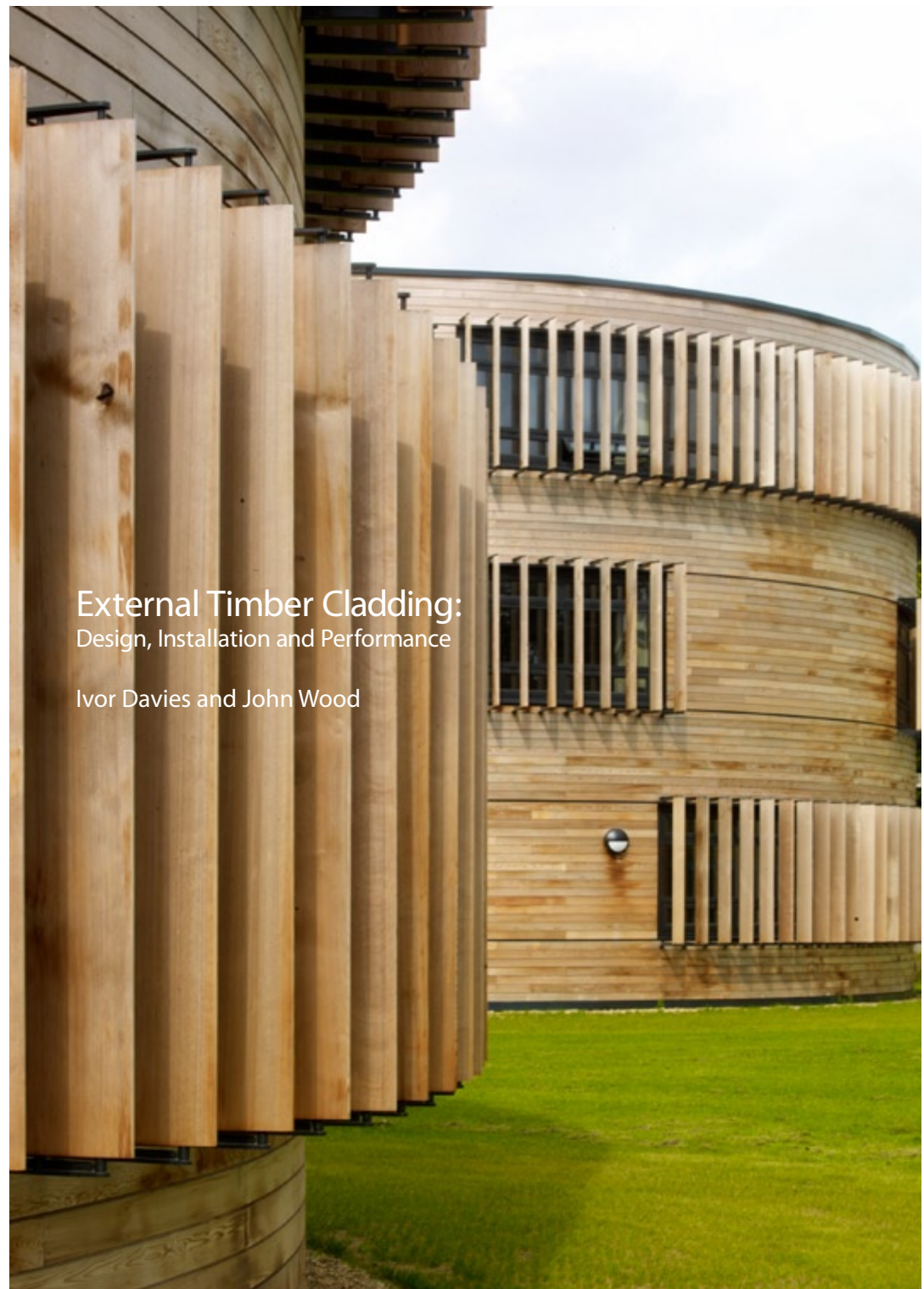
External Timber Cladding

To many construction industry professionals, external timber cladding is no more complicated than nailing planks onto a wall, but the truth is there is much more to it than this and the subject brings with it many real design and construction challenges. Done properly, the final effect can look terrific and last a very long time, but done badly the result can turn out to be a construction and litigation nightmare.

Several issues come to the fore when considering timber as an external cladding material – knowledge of the properties of different tree species and the variability presented by any natural material; the conflicting demands of regulations on how to combat moisture ingress and fire; and the specification and detailing approach required to ensure successful performance based design.

To raise awareness and improve technical knowledge and delivery in each of these areas, the Wood Studio at Edinburgh Napier University's Forest Products Research Institute has carried out extensive testing on external timber cladding to deliver the first substantial evidence-based technical guidance document on the subject. *External Timber Cladding: Design, Installation and Performance* by Ivor Davies and John Wood addresses all of the main questions that occur when designing and specifying a timber façade, viz performance, moisture conditions, moisture effects, fire safety and detailing.

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External Timber Cladding:
Design, Installation and Performance

Ivor Davies and John Wood

Programme: Maximum Timber: Continuing Professional Development for small to medium architectural practices

13:30 -14:00	(30)	Registration and coffee
14:00 -14:05	(5)	Welcome and introduction to event: <i>Chair – Peter Wilson, Director, the Wood Studio, FPRI</i>
14:05 -14:25	(20)	The Wood Products Innovation Gateway: <i>Andy Leitch, Forestry Commission Scotland</i>
14:25 -14:50	(25)	The construction potential of Sitka spruce: <i>Elspeth Macdonald, Forest Research</i>
14:50 -15:20	(30)	Sustainable Construction Timber –sourcing & specifying local timber: <i>Ivor Davies, Wood Studio, Forest Products Research Institute</i>
15:20 -15:40	(20)	Coffee/Tea
15:40 -16:00	(20)	Cross laminated timber – manufacturing from home grown material: <i>Peter Wilson, Wood Studio, Forest Products Research Institute</i>
16:00 -16:40	(40)	External Timber Cladding: design, installation and performance: <i>Ivor Davies, Wood Studio, Forest Products Research Institute</i>
16:40 -16:50	(10)	Questions and chair’s closing remarks: <i>Peter Wilson</i>

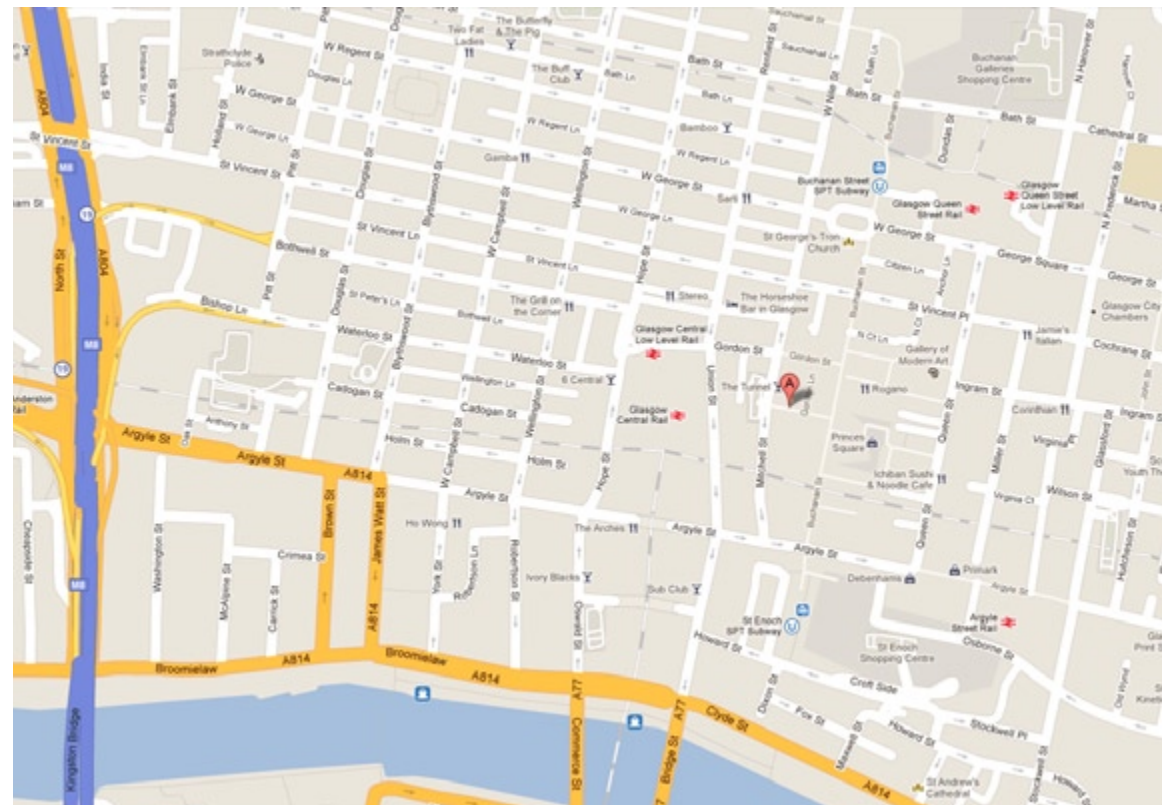
The Venue

SUST
the Lighthouse
11 Mitchell Lane
Glasgow G1 3NU

Why you should attend

The half-day session planned for Friday 7 October 2011 has been specifically tailored towards the small and medium-sized practices that make up the bulk of the architectural sector in Glasgow. Our research has shown that many offices of this size encounter difficulties in securing Continuing Professional Development input at appropriate levels and costs. In delivering a CPD programme across Scotland for Wood for Good, Edinburgh Napier University's Forest Products Research Institute has accessed EU and other funding to help ensure a comprehensive suite of material on timber and its use in construction is available at no cost to practitioners.

Even better, on the day, each attendee representing a small to medium sized architectural office in Glasgow will receive three reference publications – including the 192 page External Timber Cladding: Design Installation and Performance – with a collective value of £75-00. This, together with refreshments provided throughout the session, make this one of the best value CPD events ever offered to architects in Glasgow.



Continuing Professional Development

Attendance at the event will contribute to the Continuing Professional Development requirements of members of the RIAS and RIBA. The half-day sessions are accredited for CPD purposes by Edinburgh Napier University with certificates of attendance provided to all attendees.

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The Wood Studio and Forest Products Research Institute as a resource

The Wood Studio is one of four research centres within FPRI and has a specific remit to support innovation in the use of timber in architecture and construction. Its experienced team respond daily to enquiries from architects and other industry professionals and, where appropriate, carry out consultancy and expert witness services on behalf of practices and individuals within the profession.

Many Wood Studio projects benefit from the knowledge base and experience within the Institute's three other centres (Plant Science and Biopolymer Research, Wood Science and Technology and Timber Engineering), whilst others merit collaboration with other research institutes within Edinburgh Napier University, e.g. the Institute for Sustainable Construction, the Institute for Creative Industries and the Institute for Product Design and Manufacture.

The Forest Products Research Institute was established to provide a UK centre of excellence in timber research. Its experience and resources are there to help you deliver better timber buildings.

For further information, contact Peter Wilson, Director of the Wood Studio at:
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