WOOD MARKETING FEDERATION SEMINAR

Timber in Ground Contact

Protection and treatment of wood to enhance its life in fencing and other ground contact applications



Farmleigh House, Phoenix Park, Dublin
Thursday, 3 September 2015

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Acknowledgements

The Wood Marketing Federation (WMF) thanks the speakers and chairperson for their contributions to the seminar 'Timber in ground contact'. We are also grateful for the support of the various organisations involved as well as stakeholders who attended the conference and those who booked stands.

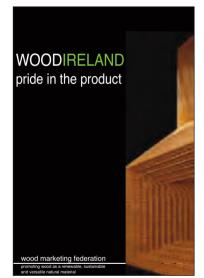
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WMF publishes a range of wood promotional and educational literature including posters, Talking Timber series and Pride in the Product. www.wood.ie

Organised by the Wood Marketing Federation and supported by COFORD, Department of Agriculture, Food and the Marine.







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SEMINAR CHAIRPERSON

Dr. Annette HarteSenior Lecturer,
Department of Civil
Engineering, NUI Galway

Dr. Annette Harte is Senior Lecturer in Engineering at the College of Engineering and Informatics, NUI Galway. Her research includes the development of engineered wood products, numerical modelling, design and optimisation of timber structures and sustainable construction. She is leader of an EU COST network on the Reinforcement of Timber Structures, comprising international researchers.

Seminar Agenda

08.45 Registration

09.45 Introduction

Paul Harvey, Chairperson, Wood Marketing Federation

10.00 Seminar launch

Dr. Eugene Hendrick, Senior Inspector Forest Sector Development/ COFORD, Department of Agriculture, Food & the Marine

10.15 Opening address

International perspective – preservative techniques

Dr. Ed Suttie, Director (Research) BRE (Building Research Establishment)

10.45 A sawmillers practical approach to timber in ground contact

Andrew Kidney, Production Director, Balcas Timber Ltd.

11.15 Improving the quality of timber in ground contact

Janet Sycamore, Operations Director at Timber Decking and Cladding Association (TDCA)

11.45 From the user's point of view

Donal Slattery, Purchasing Manager, FRS Fencing Systems

12.15 Standards and specifications for fencing – IS 435 (timber post and rail),

IS 436 (farm fencing)

Barry Matthews, Certification Officer, NSAI

2.45 Panel discussion

13.00 Close of conference

Donal Magner, Secretary, WMF



Dr. Eugene Hendrick
Senior Inspector
Forest Sector Development/
COFORD, Department of
Agriculture, Food & the Marine

Graduated in forestry from UCD in 1975. Dr. Eugene Hendrick went on to complete a year's postgraduate work before joining the Forest and Wildlife Service in 1976 and Coillte in 1989. In 1993 he joined COFORD, the National Council for Forest Research and Development at its establishment and was appointed Director in 1999. Since rejoining the Forest Service in 2010 his areas of responsibility include the COFORD Council, forest genetic resources, forests and climate change mitigation, and forest product development and standards, including renewables. He has a PhD in forest establishment and stability.

Foreword

I very much welcome this seminar as it aims to grow an important domestic and export market for forest products.

It is an exciting time in Irish forestry. In the past year a new forest policy has been published, and a new Forestry Act has been signed into law. in January the Forestry Programme 2014-2020 was launched. It continues government support for the afforestation programme, as well as a number of other schemes, including forest genetic resources, with an emphasis on building a productive and high quality forest resource. Last year, 2014, roundwood harvest reached a record level of 3.1 million cubic metres, with almost one fifth of the output coming from privatively-owned forests. Fencing and other outdoor timber uses are important markets for this material. Over the next 15 years the harvest from Irish forests is set to double, so the development of domestic and international markets is of great importance.

Ireland's forest policy is to "support the development of a competitive, innovative, value added and market focused wood processing sector which provides sustainable solutions to a diverse portfolio of users in the construction, lifestyle, renewable energy, furniture and related markets".

Timber in ground contact is a challenging setting for timber. This is all the more reason that appropriate standards are in place and that there is adherence to these standards. There has been much work carried out over the past two decades in developing and revising Irish standards IS 435, IS 436 and IS 437. With these standards in place the sector has been able to capture and retain important markets.

Having said that, it is important that we continually innovate and improve our products so we can retain and expand markets in fencing and other important products such as decking. It will be interesting to hear today about developments in the use of incising of timber prior to high pressure preservative treatment and the opportunities that this will bring to home grown timber.

The benefits of wood use are multifaceted. When we establish and manage forests we are removing the main greenhouse gas, carbon dioxide from the atmosphere. The carbon that is removed can be used to manufacture wood products which when properly specified and treated can store the carbon for several decades, while further uptake is occurring in forests. Equally important of course is that at end of life wood products can be either reused or combusted to recover stored energy so that the full mitigation benefit of the material can be realised. This aspect is likely to be a significant driver of wood product specification, manufacture and preservation in the future.

There is also the potential to greatly expand the use of wood in construction and reduce the use of carbon intensive materials. In order to grasp this opportunity there is a need for concerted action across the spectrum of regulation, specification, technical advice, research, innovation and standards development, including wood preservation technologies. The Forest Service will continue to work with the sector in addressing these areas.

Dr. Eugene Hendrick

 ${\it 3}$



Homegrown timber is fit for purpose in heavy duty ground contact applications provided the timber is treated in accordance with Irish standards.





Paul Harvey Chairman Wood Marketing Federation

Paul Harvey is the Irish Business Manager of Arch Timber Protection a Lonza Company. He has been actively promoting timber and timber products especially in his role as Chairman of the Wood Marketing Federation. He has a B.Agr.Sc. (Forestry) from University College Dublin and a Masters Degree in Environmental Science from the Sligo Institute of Technology.

Introduction from the Wood Marketing Federation

The purpose of our seminar is to revisit an important subject we addressed over ten years ago in Portaoise when the clear message then was that timber with its unique environmental credentials is fit for purpose in heavy duty ground contact applications provided that the timber is treated in accordance with Irish standards.

It is fair to say that treatment standards have focussed on the protection of the treatable portion of the sapwood. However, for heavy duty applications it is evident that the heartwood of commonly used species which is resistant to treatment needs to be further protected using techniques such as mechanical incising.

In Ireland the predominant species used for fencing is Sitka spruce (*Picea sitchensis*). The unique growing conditions in Ireland give rise to high yielding plantations of Sitka spruce which based on observations on-site and follow up laboratory work render it suitable for pressure treatment and subsequent use in construction and fencing applications.

In terms of assessing penetration in the treated zone if it is not possible to distinguish between heartwood and sapwood the whole sample should be regarded as sapwood. This particular clause is relevant to spruce where it is difficult to distinguish sapwood from heartwood in dry spruce,

Recent work on incised spruce indicates that once the timber is mechanically incised, dried and correctly pressure treated, it will meet the 15 and 30-year ground contact penetration and preservative retention requirements in current IS and BS accepted standards in Ireland and UK. This approach will allow spruce to penetrate fencing markets where it was once excluded.

There are other opportunities to move Irish timber further up the value chain and to gain market share.

This is another way to highlight the advantages of wood as a construction and design material. Like the conference, it is compatible with our mission: to promote wood as a renewable, sustainable and versatile natural material.

Paul Harvey





Dr. Ed SuttieDirector (Research)
BRE (Building Research
Establishment)

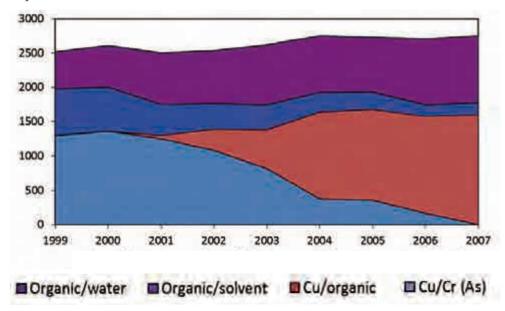
Dr. Ed Suttie is a Director in the Centre for Sustainable Products at BRE (Building Research Establishment). He works in a team delivering BRE's Materials Sustainability consultancy and research programmes sponsored by industry, UK Government and the European Commission. He has published widely in the field of timber, service life, sustainability, construction and bio-based materials.

Figure 1. Wood preservative treated wood market share in UK '000m³

International perspective – preservation techniques

Those that select materials and products for use in projects such as construction, landscaping, agricultural or for use at home are increasingly demanding more sustainable solutions. This has been driven by regulation and a wider understanding of broad sustainability issues. Decision making remains driven by price but also includes sustainability both as environmental impact and as social impact of the businesses and community we purchase from.

In the context of the UK this presentation looks at the above issues and the bigger picture for the wood protection sector, how it drives change and innovative products and processes. Reference is made to the UK's Public Services (Social Value) Act 2012, supply chain responsible sourcing and tools for measuring the environmental impact of products.



Changes in the UK market for wood preservation (Figure 1) and the significance of BS8417 *Preservation of wood – code of practice* are discussed. The ability to transform wood that has inherently variable natural durability into a more uniform material of less variability and increased reliability is a key opportunity for wood protection. The possibilities for wood preservation are discussed in the context of processes such as incising to provide a more uniform penetration and the sector activity in the UK led by the Wood Protection Association, including a quality treatment scheme, the product approval scheme and a national field trial of wood in ground contact (Figure 2).

Some of the challenges for the wood preservation sector are considered including the public perception of chemicals, the availability of naturally durable timber, wood modification techniques (such as thermal modification and acetylation) and bio-based composites.



Figure 2. BRE Watford test site of the UK national field trial of wood in ground contact

The importance of service life and our ability to predict service life are focussed on specifically. A brief insight into the customer needs for guarantees for fencing is given which was part of the outcome of a collaborative FP7 European research project *PerformWood* led by BRE. Some of the key standardisation activities in Europe that resulted from the *PerformWood* project and continue now within CEN/TC38 are reviewed. This includes the concept of a more user friendly interface for European wood protection standards for customers and users to answer their questions concerning *How long will this wood product last?*

Dr. Ed Suttie



Andrew Kidney Production Director Balcas Timber Ltd.

Andrew Kidney is Production Director of Balcas, one of the largest wood product suppliers in Britain and Ireland with a turnover of circa £80m. Balcas currently operates from three sites in Enniskillen, Kildare and Invergordon in Scotland, two of which are CHP plants.

A sawmiller's practical approach to timber in ground contact

The majority of the Irish softwood availability is Sitka spruce. Due to the natural durability of this species, certain pretreatment techniques need to be employed to ensure long service life. In the recent past there had been a loss of confidence in the performance of home-grown spruce through premature heartwood failures in service of ground contact timbers. This was due to a number of factors including poor timber conditioning prior to treatment, little or no sapwood in the timbers being treated and a resultant low chemical retention in the wood.

It has long been accepted in the sawmilling industry, that to penetrate timber cells with preservative solution, we must first make room for it by removing some of the free water that is naturally present from when the timber was still a tree.

Many of the species of home grown softwood timbers, and Sitka spruce in particular, are either naturally difficult to penetrate with preservative or have significant hard to penetrate heartwood sections once they have been machined ready for treatment.

The industry standard for preservative treatments, BS8417, now identifies surface incising as a method of achieving heartwood penetration to achieve the service life expected in certain markets.





Depth of preservative on non-incised (left) and incised (right) Sitka spruce round fencing posts.

Incising machine for round posts



Incising overcomes the issue of penetrating the difficult to treat heartwood therefore providing the timbers with a good envelope of chemical protection and a resulting improved treated timber product. The effectiveness of incising is dramatic and I understand that research has shown that the service life of treated spruce can be doubled with incising due to the improved protection.

The surface incising of timbers prior to high pressure preservative treatments is nothing new. Balcas first used this technique in the 1970s on the first machined rounds.

The technique is used to allow a deeper and more consistent penetration of the wood preservative, usually into ground contact fencing and landscaping timbers, to help achieve a more effective long term protection. These Use Class 4 (EN335) timbers are subject to the highest threat from wood destroying organisms. In those early years of round post production, the preservative chemicals were so toxic and effective, that they allowed a tolerance of the best practice pre-treatment conditioning.

However, Balcas and the industry in general, realised the need to revisit this technique and develop new incising technologies that can be integrated into our modern sawmill production lines. This will help us produce an in ground contact product that would deliver even more assured performance from the treated timbers.

Balcas has recently installed two latest technology incising machines for both sawn and round timbers. In conjunction with pre conditioning moisture removal, careful application of this incising technology, and meticulous process control of our treatment plants, we can have the utmost confidence in the longevity of our Irish grown in ground contact products.

Andrew Kidney



Janet Sycamore
Operations Director at Timber
Decking and Cladding
Association (TDCA)

Janet Sycamore is Operations Director of the Timber Decking and Cladding Association (TDCA). The Association provides guidance on how to design, specify and install timber decking and cladding correctly. With a time-honoured career in the wood preservation sector, Janet also provides support services to the Wood Protection Association.

Improving the quality of timber in ground contact

WPA initiatives to improve treated wood quality and its marketing opportunities

The Wood Protection Association (WPA) is a technical and advisory organisation dedicated to improving the value and performance of wood and to the development and promotion of wood protection technology to support the use of wood as the sustainable, environmentally beneficial construction material of choice. Established in 1934, its operations span four principal areas; preservative pre-treatments including creosote, wood modification technology, flame retardant and wood coatings.

The WPA is at the forefront of responding to the challenges faced by timber treaters and activities in recent years have been unprecedented in regard to quality and regulatory affairs. WPA has several initiatives in place, to respond to quality concerns, build confidence and counter the threat of substitution of wood used in ground contact with man-made materials including:-

- WPA BenchMark Quality scheme third party accreditation that a component is correctly treated
- WPA Approval scheme for Wood Preservative independent verification of minimum retentions for wood preservatives
- 3. The biggest ever field trial of its kind to assess the durability of British softwoods to generate solid performance data that will contribute to the better utilisation of home grown species

These are the three pillars that underpin the significant improvements seen in some parts of the UK wood protection sector in the last 2-3 years. If the momentum started by the early adoption and support of these schemes can be maintained and expanded within the UK then the long-term prospects for growth in demand for industrial wood preservation as a quality assured, responsible and effective means of protecting are excellent.

The presentations will explore these areas and discuss the marketing opportunities for properly protected timber.

Janet Sycamore





Donal Slattery Purchasing Manager FRS Fencing Systems

Donal Slattery, Purchasing Manager, FRS Fencing Systems has been buying Irish timber for over 30 years and has a keen interest in the treatment and use of timber products. FRS Fencing Systems is part of the FRS Network a co-operative established in 1980 for the provision of skilled people in the construction of fences in the agriculture, equine, residential, sports and recreation sectors.



Creosote post & rail erected in 1984

Timber in ground contact – the user's view

In our contract and retail business we in FRS are significant users of treated wood mainly in the form of round farm fencing posts, and sawn timber for the residential and equine fencing markets.

Today, the vast bulk of our round fencing posts usage is in the form native softwoods treated with creosote or with new generation preservatives.

CCA (Copper-Chromium-Arsenic)

Up to the banning of its use a number of years back nearly all our round farm fence posts were CCA treated. This we found to be a very effective preservative provided the timber was dried correctly prior to treatment. Unfortunately some of the material put on the market through the 1980s and 90s was not dried and consequently not treated correctly.

This led in some cases to a short service life with some posts showing signs of decay after 3 to 4 years. Over the years many farmers have lost faith in the "green post". This in turn makes it difficult to convince some of the effectiveness of treatment with new generation preservatives, even when produced to the IS436 standard.

Creosote

With the banning of CCA the majority of round farm fence posts we now use are creosote treated. Our experience with creosote treatment is that it will give a "15 year plus" service life on round softwoods and a 20 years plus service life on sawn (non spruce) timber.

When timber is dried and treated correctly, creosote, while not being as "user friendly" as the alternatives, is the best treatment for agricultural/equine use. We also find the use of creosote in equine fencing more or less eliminates the problem of horses cribbing or chewing the timber.

New generation preservatives

As already mentioned our experience was that CCA treated posts gave a long service life when timber was dried and treated correctly. Where sub-standard drying or treating with CCA was carried out the service life varied but some level of preservation was attained.

We find the new generation treatments are not as effective as CCA unless timber is correctly dried and prepared prior to treatment.

The use of incising in conjunction with existing preservatives has been in operation for a number of years but we have used very little of this material to date. However we are open to further use as our objective is to ensure as long as possible service life for timber in ground contact.



CCA treated fencing erected in 1995

Treatment standards and specifications for roadside fencing

Our experience with the now out of date RC25 specification for roadside fencing was very positive. Such fences erected by us in the 1990s are still standing in good condition today.

The IS435 roadside fencing standard, which is now 10 years old, has yielded fences which we are confident will give a long service life. I feel the success of RC25 and IS435 are significantly due to the independent monitoring and testing of material which took place as part of the projects where the material was used. If we were to move to a "self-certification" model I feel this would be the slippery slope towards problems in the future.

Conclusion

Round treated softwoods make up the vast bulk of the fencing posts used in Ireland. Likewise, native sawn timber provides for most of the post and rail market.

The Irish timber industry has been fortunate to date in that there has not been major substitution with either plastic, steel, or fibreglass. However the new generation preservatives allow no room for leeway and timber must be dried and treated correctly as outlined in the IS436 standard to avoid further alienation of an already bruised customer.

Donal Slattery



Donal MagnerSecretary
Wood Marketing Federation
Forestry Editor, *Irish Farmers Journal* and consultant with
Magner Communications

Donal Magner has worked in most sectors in Irish forestry including forest management, marketing, communications and education. He holds a master's degree in forestry from UCD. He is the author of the critically acclaimed *Stopping by Woods: A Guide to the Forests and Woodlands of Ireland* and co-editor of a number of publications including *Woodspec*. He is a recipient of the prestigious RDS Forest Service Judges' Special Award for his contribution to Irish forestry.

The Dun Laoghaire Rathdown County Council (DRCC) operations centre in Ballyogan, Co. Dublin winner of Wood Awards Ireland, organised by the Wood Marketing Federation and supported by the RIAI.

Wood Marketing Federation – promoting a wood culture

The Wood Marketing Federation (WMF) was founded in 1989 to promote wood and wood products providing they are sourced in sustainably managed forests. Membership and supporters include sawmills and other timber processors, State agencies and stakeholders involved in wood promotion and research.

Our promotional programme covers wood processing, manufacture, design, preservation and usage from traditional applications to product development and innovation. Our audience includes architects, engineers, designers, specifiers, timber processors and manufacturers, researchers, preservation companies, State agencies and educational bodies. The WMF mission is *to promote wood as a renewable, sustainable and versatile natural material*.

Projects include:

- Wood Awards Ireland, supported by the RIAI.
- Irish Timber Information Centre (ITIC).
- Woodspec A Guide to Designing, Detailing and Specifying Timber in Ireland.
- All-Ireland Third Level Student Wood Awards.
- Wood promotional and educational events.

Wood Awards Ireland

Wood Awards Ireland was the main event to celebrate the WMF 25th anniversary in 2014. The awards were supported by the Royal Institute of the Architects of Ireland (RIAI) and State Architect, Ciaran O'Connor of the OPW. Major sponsors included COFORD, Department of Agriculture, Food and the Marine, AHEC – American Hardwood Export Council, Coillte and Enterprise Ireland.

The project received 63 quality entrants. The jury selected a shortlist of 18 comprising three major public buildings, five small-scale buildings and 10 submissions in furniture, innovation, conservation and international projects.





Slievebawnogue, winner of the 'Small Private Building-Structural Award'. Architects: Clancy Moore



Tree, located in the Dell building, Mahon Point, Cork won the 'Furniture Award'. This design was conceived by Genslar Architects London in collaboration with Henry J Lyons Architects Dublin. Detailed design and execution was by O'Driscoll Furniture.



Caitríona Uí Chúláin Co-ordinator, Irish Timber Information Centre

The WMF secretary and jury visited all projects based in Counties Dublin, Cork, Meath, Galway, Westmeath, Wicklow and Kildare. Timber for winning projects was sourced in forests throughout the world from Ireland to the US and from Europe to New Zealand. The only stipulation was that all timber had to be sourced from sustainably managed forests and in accordance with the EU Timber Regulation, which counters the trade in illegally harvested timber.

The awards were presented by Tom Hayes, Minister of State with responsibility for forestry on November 28 at a gala event in Dublin Castle. The Dun Laoghaire Rathdown County Council operations centre in Ballyogan, Co. Dublin was the overall winner. European larch, Scots pine and Norway spruce were used extensively in the Ballyogan building which "sequesters approximately 1,000 tonnes of carbon dioxide within the timber structure" claimed the lead architects Bob Hannan of Dun Laoghaire Rathdown County Council and Merritt Bucholz of Bucholz McEvoy.

The 'Small Private Building-Structural Award' went to the "double" house at Slievebawnogue in the foothills of the Dublin Mountains. A potentially negative combination of strict planning and significant site constraints was transformed into a positive response to both site and client brief. The disused quarry in a conifer plantation was skillfully and respectfully altered to make a unique setting for a special building.

The 'Restoration and Conservation Award' went to the Dublin Dental Hospital for its dignified new timber insertions into five protected old buildings. Creativity and respect combined with site specific inventive thought and different levels of intervention and restoration such that the new whole is more than just the sum of its historic past.

The 'Furniture Award' was made to the Cork Dell "Tree" which oscillates between a piece of furniture and an art work installation. Some 400 separate yet interconnected elements of white oak climb 15 metres in a four-storey atrium. This is a timber installation of great technical skill and bravado.

The 'Innovation Award' went to "Contemplation Space" in the new Mater Hospital. This egg shaped lattice structure creates a fishnet of exclosed space for calmly sitting and waiting in an otherwise frenetic entrance foyer.

The 'International Award' went to the "Vessel" at the Venice Architectural Biennale on 2012. This soaring installation is for the imagination. It is large yet incremental in scale; both a place to interact and reflect.

her area of expertise, she will refer them to a relevant person in Wood Technology Ireland (WTI), which has been established to provide the Irish timber and construction industry with technical advice and information.

WMF celebrate 10th Third Level Student **Wood Awards**

The Federation celebrated the 10th annual Third Level Student Wood Awards in the Botanic Gardens, Dublin on July 2. Judging took place on June 18 and awards were be presented Tom Hayes, Minister of State. Since its inauguration, architectural, engineering and design students from 12 third level colleges have consistently participated in the awards.



Minister Hayes (back left) presented prizes at the annual Third Level Student Wood Awards in the National Botanic Gardens. With Minister Hayes are some of the winning students, Duncan Stewart, Paul Harvey, chairman WMF and Gerard Murphy representing Coillte, the main sponsor of the awards.

SEMINARS AND PROMOTIONAL EVENTS

Hardwoods

Tom Hayes, Minister of State with responsibility for forestry provided the keynote address to the national conference on hardwoods on May 27. "The question addressed by the conference is very relevant and I commend the Wood Marketing Federation and the Society of Irish Foresters for organising this conference to explore this specific issue," he said. The conference explored opportunities to add value to hardwoods throughout the growing, processing, and manufacturing chain.

Shows

Tom Hayes, Minister of State who launched the

hardwood conference with Paul Harvey,

Chairman, WMF.

The Federation promotes wood and wood products to a specialist audience at a wide range of events including Plan Expo-Ecobuild in the RDS showcasing wood use and design and Timber Expo in England.

We also promote timber to the general public such as Garden of Plenty – Sustainable Living (winner of Silver Gilt Medal at Bloom Garden Festival) and Meitheal-Wood Collaborative at Electric Picnic.

Wood Energy

We also collaborate with organisations such as IrBEA – the Irish BioEnergy Association – and Laois Sawmills in promoting renewable energy at shows including Wood Energy in the RDS.

New Irish Timber Information Centre

Work was finalised this year between the Wood Marketing Federation, COFORD and NUIG on the setting up of the Irish Timber Information Centre (ITIC). Established by the WMF and hosted by NUIG (c.uichulain1@nuigalway.ie), the objective of ITIC is to provide information on a wide range of timber issues to relevant stakeholders especially timber specifiers. Queries on timber related subjects will be forwarded by email to Caitríona Uí Chúláin in NUIG who is co-ordinating the project for WMF. She is undertaking a structured PhD in Timber Engineering at NUI Galway under the supervision of Dr. Annette Harte which began last October.

Caitríona will be in position to answer some queries but where these are outside

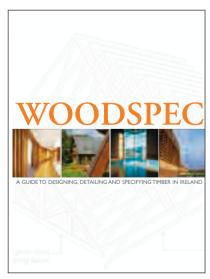


Above: Iim McNamara, Laois Sawmills Ltd. and Green Pellets and Donal Magner WMF at the Wood Energy Show in the RDS.

by TAKA Architects, Clancy Moore Architects and Steve Larkin Architects. The building catered for events and performances.Panelboard material and sawn timber provided by Coillte Panel Products and Glennon Brothers.



Below: Pavilion 1 – The Laboratory, designed



Woodspec - A Guide to Designing, Detailing and Specifying Timber published by the WMF.

While our core mission relates to promoting wood in areas such as construction, design, treatment, research and innovation, wood energy now plays a key part in the story of wood. This is becoming increasingly important at a time when fossil fuels account for 94% of all energy required in Ireland. Ireland's fossil fuel import bill was €6 billion in 2011, with oil accounting for three quarters of total imports.

Wood projects in London

WMF and two of its members - Coillte and Glennon Brothers - supported Irish Design 15 projects as part of the New Horizon programme, involving presentations of the work of 10 emerging Irish architecture practices, in high-profile venues around the world. Kings Cross and the Design Museum were the chosen venues for London and the five emerging practices representing Ireland were Emmet Scanlon, Clancy Moore, TAKA, Steve Larkin and Hall McNight. Reflecting the essence of ID2015, the architects and designers were encouraged to collaborate and engage with other emerging talents in contemporary Irish design culture.

WMF supported Marc O'Neill who won the Grand Designs Garden Designer of the year. Coillte Panel Products provided material for the project which took place at London's ExCeL from the 2 - 10 May 2015. The show offered visitors a unique opportunity to see all the latest trends for the home as well as many products never seen before. Based on the Channel 4 TV series, and presented by Kevin McCloud, the event had over 500 exhibitors and attracted 110,000 visitors.

The Wood Marketing Federation worked closely with Marc and Simon O' Driscoll of Simon O'Driscoll Furniture who is also a judge in our Third Level Student Wood Awards. We also wish to acknowledge the work of Nick Marron, Coillte Panel Products who co-ordinated the sourcing and delivery of the panel board materials.

WMF PUBLICATIONS

Woodspec

Woodspec - a Guide to Designing, Detailing and Specifying Timber in Ireland is aimed primarily at architects, engineers, designers, builders, planners, specifiers and students, but is designed to appeal to anybody with an interest in wood and wood working. The large format 352-page hardback book, originally published as a manual in 2001, was completely revised and updated in 2007. New sections and information have been added, including 'Creating in Wood' which presents case studies of timber design in award winning large-scale building projects, timber frame housing, roadside fencing and acoustic barriers and interiors. Some of the information in Woodspec is available on-line (www.woodspec.ie), including technical sections on design guidance, detailed drawings, timber specifications, building specifications and reference materials. COFORD funds a free Woodspec technical service and also hosts the publication. Woodspec is available for €35.00 including postage and packaging. Email: info@wood.ie.

Other publications

The Federation also produces the newsletter Woodwords, wood promotional and educational literature, posters, the Talking Timber series and Pride in the Product, information booklet on WMF members and supporters.

Donal Magner

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The Wood Marketing Federation is a non-profit making organisation, founded in 1989 to promote wood as a renewable, sustainable and versatile natural material

The following members and supporters of WMF ensure that we deliver a strong wood promotional and educational programme:

- AHEC American Hardwood Export Council
- ECC Teoranta
- Laois Sawmills
- Arch Chemicals Lonza Wood Protection
- Coillte
- Coillte Panel Products
- COFORD National Council for Forest Research & Development, Department of Agriculture, Food and the Marine
- Enterprise Ireland
- Glennon Brothers
- Murray Timber Group
- Wood Coatings Ireland

Wood Marketing Federation acknowledges support from the following companies and organisations in 2012-2015 programmes:

- AHEC American Hardwood Export Council, sponsors of Wood Awards Ireland 2014.
- COFORD, Department of Agriculture, Food and the Marine WMF wood promotion programme and related projects including Third Level Student Wood Awards and Wood Awards Ireland.
- Coillte Third Level Student Wood Awards 2006-14, Wood Awards Ireland and wood promotional programme.
- NUI Galway hosting Irish Timber Information Centre
- Earth Horizon Productions (Duncan Stewart) Third Level Student Wood Awards
- Enterprise Ireland Wood Awards Ireland 2014
- Glennon Brothers Vessel project, Electric Picnic Woodspace exhibition and New Horizons.
- IrBEA Irish Bioenergy Agency collaboration at Energy Show 2014
- Laois Sawmills Wood Energy Show
- Lonza Wood Protection Garden of Plenty Sustainable Living, Bloom 2013 and design of literature
- Murray Timber Group Bloom 2013, wood promotion programme, Fleadh Cheoil, Sligo
- Simon O'Driscoll Furniture Third Level Student Wood Awards
- Society of Irish Foresters Third Level Student Wood Awards and National Forestry Conference
- Woodcollective Garden of Plenty, Bloom 2013 and Electric Picnic
- RIAI Wood Awards Ireland
- Tree Council of Ireland Poster campaign (Wood the sustainable resource)

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