



HOT TOPIC 2018
Building With Timber
 The Only Carbon Neutral Material?
 Bristol - 6th December 2018



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**The Green Register's HOT TOPIC 2018:
 Building with Timber - the only Carbon Neutral Material?**

09.30 - 17.00hr, 6 December 2018, Bristol.

James Allen, E&M West Ltd

Dr. Jim Allen, director of structural engineering firm E&M West in Bath and TGR Steering Group member, will be giving his unique perspective as an engineer on the use of timber in construction.

Dr. Allen's presentation will briefly review the development of the industry before lifting the lid on the procurement of materials and design services that go into a typical timber frame design project.

For many, the process is something of a mystery and what goes on between the initial performance specification and the delivery of the frame to site will be explored. Jim will explain why there are many reasons to choose timber frame as a design option, particularly now the industry is taking the sustainability agenda seriously. He will give the engineer's perspective with advice on the best design approach to maximise the advantages and avoid the pitfalls that can erode the potential benefits of timber.

Dr. Allen believes that this advice, if followed by those preparing a project brief, can lead to substantial benefits in terms of both cost and environmental impact and will illustrate this using case studies from his own practice.

More about Jim:

Dr. Allen founded E&M West in 2009 to pursue his interest in sustainable design practice. He has 40 years' design and research experience including the design of both refurbishment and new build projects and associated infrastructure.

Dr. Allen has built on the Practice commitment to sustainable construction and embracing the technologies necessary to design and detail timber frame structures, providing timber frame design and detailing services to both client side and manufacturing industry. He is a longstanding Green Register member and serves on their steering group.



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Robert Borruso, Community Self builder

Join expert speaker and community builder Robert Borruso to gain a greater understanding of how to specify truly sustainable timber.

The UK building industry consumes millions of tonnes of timber a year. Whilst in the past the sources of this timber were entirely unregulated, today greater awareness of the significant environmental damage thoughtless timber specification can cause has led to the introduction of many different certification schemes - some good, some not so good.

Speaker Robert Borruso will demonstrate that his experience has shown that just specifying 'sustainable timber' does not always lead to 'sustainable timber' being used. Rob will explain what schemes are available, where they can go wrong and explores ways of designing out the risk of unsustainable timber being used in the first place.

More about Rob:

Robert Borruso has studied to degree level both mechanical engineering and environmental science and has 10 years of experience in both fields. This combination gives him an exceptional understanding of the issues associated with moving sustainable energy systems from the fringes to the mainstream of the construction industry, with a focus very much on delivering pragmatic and workable solutions.

Robert is currently working as an independent energy consultant with a client base ranging from small community groups to housing associations. He also has extensive experience in troubleshooting existing underperforming, renewable energy installations. He also occasionally writes on environmental issues in his own, often controversial, style.



Robert's previous professional experience includes four years as a Product Specialist at Construction Resources Environmental Building Centre and as a Renewable Energy advisor at Sustainable Energy Action, both in London. He now lives in Scotland and is involved in a much more hands on approach with renewables.

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Matt Harrison, White Design & Aaron Coleby, Real World Visuals

How Much Carbon in a Yuletide Log?

This highly interactive workshop will be facilitated by Matt Harrison, director at White Design & Aaron Coleby, Account Manager of Bristol's Real World Visuals.

Matt and Adam will be testing the delegates' knowledge about timber by asking some challenging questions that will blow away some myths, enlighten the audience and spark some healthy debate.

Participants will be given tokens for each correct answer and the winner will receive a real chocolate yuletide log for their own consumption.

More about Matt and Aaron:

Matt became director of White Design in 2011. He has a particular focus on business development within the practice alongside strategic sustainable design consultancy.

He has extensive experience in delivering low carbon buildings and projects, working through policy and strategy to detail and delivery, particularly within the education, community, urban design, masterplanning and housing sectors.



His approach is driven by a desire to integrate environmental sustainability within the socio-economic and cultural context in which we live. He is a panel member of the Bristol Urban Design Forum, who provide urban design review services for major schemes within Bristol and its environs.

Prior to becoming Account Manager of Real World Visuals, **Aaron** began his career working in broadcast television. He then went on to have a successful teaching career specialising in integrating digital technologies into classroom practice. Later, Aaron worked as a digital technology expert and freelancer as a Digital Project Manager and User Experience Researcher / Designer.

Aaron's communication and presentations skills have been honed over a long teaching career, allowing him to lead and facilitate client discovery workshops, conduct user testing, and diagnose user needs quickly and effectively. He is able to bring creatives and technical folks together to work effectively.



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Richard Hatfield and Malcolm McMahon, Greenheart Sustainable Construction Ltd

A builder's perspective of working with timber - successes, challenges and case studies

Greenheart Sustainable Construction – a Bristol-based building company and long-term TGR members – will bring their considerable expertise of using timber in projects to this conference.

Greenheart has always been committed to sustainable construction, having built timber-framed houses since 2000. Speaker and director Richard Hatfield states *“the use of timber has played a major part in most of our buildings, being carbon neutral, sustainable, recyclable & natural”*.

The builder’s perspective is a very interesting – and often not heard – point of view and in his presentation, Richard will examine how the use of timber in residential construction has changed for the company over the past two decades.

Using several case studies from Greenheart’s portfolio to illustrate the point, Richard will tell the story of how timber construction has developed over the past 20 years, starting with simple 4 x2 structural buildings through to super insulated 400mm I-beam panelised wall systems.

Greenheart founding partner Malcolm McMahon will complement the talk by sharing some on site experiences of using timber, particularly best practice detailing.

The speakers will conclude their presentation by discussing what timber in construction will look like in the future including their thoughts on pre-fab construction.

More about Richard and Malcolm:

Richard’s background is in civil engineering, environmental consultancy and carpentry. He built his first timber framed house for himself in 1999 and never looked back. When not at work or with his family, Richard can be found tinkering in his workshop being creative or cycling over the nearest hill.



Malcolm started as an apprentice carpenter. On completing a Masters in Architectural Conservation he founded Greenheart with architect Bill Flinn, keen to challenge the 'builder' stereotype and make interesting, eco-friendly buildings within a fair working environment.



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Alastair Ogle, Waugh Thistleton Architects

An Architect's Experience of Building Mass Timber Buildings

Alastair Ogle, architect and associate at Waugh Thistleton Architects, specialises in designing and delivering mass timber buildings. Their mass timber projects include mid-rise residential buildings for Britains largest developers, high-rise office buildings and bespoke homes and workplaces.

Alastair will present two innovative timber frame case studies he has recently worked on.

The first – Vitsoe's new headquarters in Leamington Spa – has a structure made entirely of a newly developed beech laminate-veneer (LVL), the first in the UK. Alastair will explain how this high performance engineered hardwood permits beams and columns to have smaller cross sections than softwood glulam, thereby offering greater elegance to the timber structure.

The second project - Dalston Works - is the world's largest CLT building, a ten storey 121-unit made entirely of CLT from the external, party and core walls, through to the floors and stairs, weighing a fifth of a concrete building of this size, and reducing the number of deliveries during construction by 80 per cent.

Alastair will demonstrate that modern methods of timber construction can help ensure that the solution to the current housing crisis does not exacerbate the existing environmental crisis.

More about Alastair:

Alastair Ogle studied at Manchester School of Architecture and since moving to London has worked in a range of sectors while specialising in designing and delivering mass timber buildings. He is focused on delivering architecture that aims to make the world a better place, both socially and environmentally. Recently, Alastair has assisted in writing a design guide for modular housing in collaboration with Swan Housing and contributed towards various publications on Cross Laminated Timber.



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Paul Southcott, HECO Schrauben / Aptus Fastener Systems Ltd

Paul Southcott, Technical Consultant at HECO-Schrauben will give a technical talk on the use of various types of fixing methods and their applications in timber construction.

Buildings in timber construction are often designed using slim components, which results in limited space for fixings.

Paul will talk about the various aspects of timber construction and their specific requirements dependant on the dimensioning of the components and the applied loads and load directions. As a specialist manufacturer and innovator of fixings for timber, HECO develop and optimise their products to meet the needs of the timber industry.

Paul will present some applications where HECO's products can be used and how to calculate the amount of screws needed for a defined impact load with their software HCS (free to download here: www.heco-schrauben.de)

More about Paul:

Paul started his training as a carpenter in Germany in 1989 before moving on to train as a building technician at the Steinbeiss-Schule in Stuttgart. During this time, he worked for a company specializing in indoor air pollution, taking samples of VOC's and asbestos.

Paul then returned to carpentry on a self-employed basis, working on solar energy projects, mounting photovoltaic panels on roofs and on the ground as solar parks.



While self-employed, he worked on the building of a number of photovoltaic plants and carried out various other projects all over Germany, Switzerland and Denmark.

Since 2014, Paul has been working at HECO as a technical consultant.

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Neil Turner, Ecological Building Systems

Insulating and Achieving Airtightness with Cross Laminated Timber

This presentation will bring together expertise in natural wood fibre insulation, incorporating intelligent airtightness and wind-tightness solutions focusing on how best to optimise the design and on-site delivery of truly high performance mass timber constructions.

More about Neil:

Neil is Technical Sales Manager at Ecological Building Systems. A BBA-competent U-value assessor, who has been involved in developing CEN (Comité Européen de Normalisation) European standards, Neil has extensive experience in the building products sector. Neil advises architects, contractors and timber frame specialists on the specification of sustainable insulation products and has been involved in numerous sustainable projects throughout the UK.



Recent projects that Neil has been involved with include:

- Bristol City Council affordable Passivhaus housing scheme with pro clima systems, Halstatt Construction and Gale & Snowden Architects
- York Road Montpellier Bristol, internal and external renovation with Diathonite Evolution system, Andrew Dale Architects
- Oak Meadow Primary School, Thomas Vale Construction and Cygnum pro clima
- West Dulwich Passivhaus new build pro clima systems, RDA Architects

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Victor Orive, Zaha Hadid Architects

Zaha Hadid Architects (ZHA) have used timber in innovative ways in several of their projects, such as the Investcorp Building (Oxford, UK), London Aquatics Centre (London, UK) and Al Wakrah Football Stadium (Al Wakrah, Qatar).

Their experience-based knowledge of the different possibilities of timber in architecture is demonstrated in their latest project - a football stadium and eco park for Forest Green Rovers.

Victor Orive, architect and senior associate at ZHA, will describe how the football club's heritage, ambition and vision reflect ZHA's own, combining the latest material research and construction techniques with new design approaches to build a more ecologically sustainable and inclusive architecture.

The use of timber as the main structural element for both the proposed roof structure and the bowl including the terraced seating structure will be unique, creating an asset of exceptional quality and innovation while respecting the wider agrarian character of the area.

Victor will explain that for a club like the Forest Green Rovers, the eco-credentials of timber and the emblematic value to the community of a wooden stadium make it the only choice for this innovative project.

More about Victor:

Victor joined Zaha Hadid Architects in 2007, becoming an Associate in 2014. He has been involved in both the design and delivery of a range of the practice's projects and competitions. He is a registered architect in both the UK and Spain, and is one of the practice's in-house experts in parametric design.

Victor has lectured on parametric design and urbanism in several universities and from 2011 to 2013 he served as a Co-Director for the Architectural Association's visiting school in Buenos Aires.

Victor has an architecture degree from the ETSAM, Polytechnic University of Madrid in 2003 and a MArch in Architecture and Urbanism from the Design Research Laboratory at the Architectural Association, which he received in 2007. He also studied architecture at the Technische Universität Berlin as part of the Erasmus Programme.



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Rupert Scott, TRADA

Timber in Construction - The Coming of Age

Rupert Scott, Membership and Marketing Manager at TRADA (Timber Research and Development Association) will open the conference with a keynote address.

Working at TRADA, Rupert lives and breathes timber in all its uses in buildings and will state the case for timber as an excellent choice when looking to specify products that are beautiful, long-lasting and above all, sustainable.

He will cover:

- the bigger picture & direction of travel - how timber compares with other building materials
- how construction professionals can encourage clients chose timber as a building material
- what tools, guidance and publications are available to 'change the hearts and minds' of those in the design team resistant to using timber

More about Rupert:

Following a degree in Production and Operations Management at Nottingham University, Rupert has pursued a diverse career for over 25 years in the woodworking and construction industries, spanning quality management, R&D, production management, marketing, and fire and regulation consultancy.

Whilst working for a door manufacturer he became the named inventor of a patented fire door design. He also provided passive fire consultancy advice to the Historic Royal Palace Agency (which manages Hampton Court Palace, Tower of London and Kensington Palace) for over 2 years following the lessons learned from the fire at Windsor Castle.



He was instrumental in the formation, launching and growth of Timber Expo from the outset and has remained committed to working on content and promoting the show ever since.

Rupert now draws on much of this experience to help him in his current role as TRADA Membership & Marketing Manager. He is responsible for the strategic development and management of TRADA's membership strategy, events and exhibitions programme and marketing activities.

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