



# Network

## News

March 2008

### **Achieving The Energy Standard Of Level 3 Of The Code For Sustainable Homes.**

AECB is a member of the Energy Efficiency Partnership for Homes New Build Group. The Group has just submitted a report to government on the difficulties they face in meeting Code Level 3...

Go to [www.eeph.org.uk/partnership/index.cfm?mode=view&category\\_id=38](http://www.eeph.org.uk/partnership/index.cfm?mode=view&category_id=38), for more information.

### **Which Renewable Energy Source Is Right For Your Home?**

Homeowners who are keen to install renewable energy in their homes have received a boost with the launch of a website specifically designed to help them make the right energy choices. As well as a wealth of information the site includes a unique questionnaire which allows users to quickly determine the renewable energy source which is most appropriate for their home together with the capital costs, CO2 savings and return on investment they can expect.

GreenEnergy360.org is a comprehensive information website for those considering renewable energy in their homes. The aim of the site is to be able to deliver information to meet the needs of homeowners, whatever the state of their own understanding of renewable energy. The site is a completely free resource and designed to be the single most comprehensive source of information on renewable energy for the home available on the web.

Central to the website's ability to give homeowners useful advice is a module which takes site visitors through a simple questionnaire designed to identify the renewable energy installation which is most appropriate for their needs. Developed in association with Loughborough University University's Centre for Renewable Energy Systems Technology (CREST), the questionnaire is unique in cutting through the technical details and meeting the needs of those who are keen to find out whether renewable energy will be a good choice for their home or small business. The questionnaire provides its conclusions graphically, providing the user with likely capital cost and CO2 savings, together with the energy yield and return on investment they can expect from a particular renewable energy choice.

Having provided users with the information they need, the site can go a step further and, if requested, can refer the user to a selection of local installers who can quote for the required work.

Go to [www.GreenEnergy360.org](http://www.GreenEnergy360.org)

### **Route To Low Carbon Future For Wales Mapped Out**

A major step on the path to making Wales a low carbon energy economy was taken on the 19th Feb, when the Minister for Environment, Sustainability and Housing, Jane Davidson launched the Renewable Energy Route Map.

The Route Map sets out an ambitious programme aimed at transforming the way Wales produces and uses energy as part of the Welsh Assembly Government's commitment to tackling climate change.

It demonstrates to the world what countries, even small ones, can be doing to maximise the use of their natural renewable resources.

More information is at <http://new.wales.gov.uk/news/presreleasearchive/190208route/?lang=en>

### **Controversial Biofuels – House Of Commons Review**

Some biofuels could lead to environmental damage in the UK and the destruction of environmentally crucial rainforests, concludes a report by the House of Commons Environmental Audit Committee.

The report, 'Are Biofuels Sustainable? First Report of Session 2007–08', urges the government to ensure that biofuels policy balances greenhouse gas cuts with wider environmental impacts so that biofuels contribute to sustainable emission reductions.

Go to [www.parliament.uk/parliamentary\\_committees/environmental\\_audit\\_committee.cfm](http://www.parliament.uk/parliamentary_committees/environmental_audit_committee.cfm)

Source: [www.get-sust.com/newsletters/issue34.html](http://www.get-sust.com/newsletters/issue34.html).

### **Space Of Waste – An Inspirational Take On Waste Reduction**

A temporary building designed and built by architecture students from the University of Sheffield, to raise awareness of diverting waste material from landfill has been nominated for the AJ Small Projects Award. This highly unusual temporary building – known as Space of waste – is made entirely from other people's rubbish!

The project was commissioned by [www.whywaste.org.uk](http://www.whywaste.org.uk), a free online waste exchange for businesses in Yorkshire and the Humber. The challenge for the student design team was to find and use reclaimed and recycled material from the waste exchange.

Some of the walls are made from the waste 'skeleton' sheets of birch plywood left over from the manufacture of children's furniture; another wall is made from bailed blocks of polythene bags. The roof comprises 900 scrap carpet tiles; and even the building's lighting is recycled, with chandeliers made from cylindrical Perspex off cuts from a shop-display manufacturer.

Construction aspects of the build were overseen by Geoff Stow, self-build expert and timber-frame construction lecturer at the Centre For Alternative Technology in Wales; with structural calculations by Arup.

Winners of the AJ Small Projects Award will be announced in March, see photos of the project at [www.beat.org.uk/bm/why\\_waste/space\\_of\\_waste/index.shtml](http://www.beat.org.uk/bm/why_waste/space_of_waste/index.shtml)

Source: [www.get-sust.com/newsletters/issue34.html](http://www.get-sust.com/newsletters/issue34.html).

### **Greening London Wall By Wall**

Ken Livingstone's London Plan continues to set the pace for sustainable planning policies, with this week's update strengthening policies on decentralised energy systems and confirming a requirement for a 20% reduction in carbon emissions by new developments through the use of renewable energy.

There is also a brand new policy requirement for living roofs and walls, which the mayor expects borough planners to apply on 'all major developments where feasible'. Accordingly, these roof and wall planting policies are supposed to appear in time in local development plan documents, alongside encouragement for living roofs in smaller developments down to the scale of extensions.

Developers are expected to evaluate combined cooling, heat and power as a matter of course, with the plan offering a hierarchy of CHP and communal heating options. Sites are also supposed to be designed to maximise future opportunities for decentralised energy.

But it will be the mayor's insistence on pressing ahead with the 20% contribution from onsite renewable energy generation that is likely to meet most resistance from the development industry lobby. Critics of the proposals, which emerged last summer, continue to argue that the 20% target is not economically achievable in dense, urban areas.

Livingstone's position, of course, is that this latest reiteration of the plan is another milestone in London's development, confirming its position as a global leader in environmental planning.

In terms of compliance, the mayor's office can put direct pressure on major strategic development proposals to meet the plan requirements now, but is forced to wait for individual boroughs to play catch up in their own local development plans, with some more eager to fall into line with City Hall than others.

The London Plan has guidance on everything from housing densities to definitions of housing affordability, and with the addition of supplementary planning guidance is now an extensive document. It also has its own website now at [www.london.gov.uk/thelondonplan](http://www.london.gov.uk/thelondonplan)

Source: RIBA Practice Bulletin - No. 434 (21 February 2008)

### **Climate Modelling Shows How Parks Can Cool Cities**

'Green infrastructure' – a.k.a. trees and parks – can play a valuable role in keeping our cities cool in the hotter summers we're likely to face in future, say researchers in Manchester.

Features of the urban environment such as the urban heat island effect, and changes to hydrology such as increased surface runoff of rainwater have wide-ranging implications for the overall climate of the city-region. For example having fewer vegetated surfaces leads to a decrease in evaporative cooling, and at the same time the increase in 'sealed surfaces' results in increased surface runoff.

The team from the Faculty of Life Sciences at the University of Manchester used their own city as a case study, First they gained a thorough understanding of the make-up of Manchester's urban environment using Geographic Information System (GIS) mapping, then they used the data on types of vegetation, hard surfaces, buildings and so on, to model the local climate. Once this was achieved, they could then vary the parameters to find out what would happen when there was more or less parkland or other forms of vegetation (such as buildings with green roofs).

Whereas we have known since Victorian times (and earlier) that parks and gardens have positive benefits for the urban environment, this study is particularly useful because the impacts have been quantified the scale of potential changes and the model can be replicated for other cities.

Go to [www.atypon-link.com/ALEX/doi/abs/10.2148/benv.33.1.115](http://www.atypon-link.com/ALEX/doi/abs/10.2148/benv.33.1.115) for more information.

Source: [www.get-sust.com/newsletters/issue34.html](http://www.get-sust.com/newsletters/issue34.html).

### **Aggregated Benefits On Site**

The use of recycled aggregates is increasingly adding to the sustainability credentials of larger projects and is starting to become a requirement among some clients. WRAP (Waste & Resources Action Programme) has just launched free guidance to assist the process and is presenting it in two parts, one addressing the concerns of contractors and another aimed at clients and designers/specifiers.

As recycled aggregates become more widely available, more attention is being given to the quality control systems used in their production, seen as the key to successful specification for different types of project.

The guidance documents can be downloaded from WRAP's 'AggRegain' website, which also offers case studies, at [www.aggregain.org.uk/publications/](http://www.aggregain.org.uk/publications/)

Source: RIBA Practice Bulletin - No. 434 (21 February 2008)

### **Rallying To The Sustainability Clause?**

Should construction contracts actively promote sustainability through additional performance provisions? This is the question that the Joint Contracts Tribunal (JCT) set out to answer this week at the start of a month-long industry consultation. The exercise follows discussions held in December between JCT and various industry senior executives, described as encouraging. JCT says it wants to see how widespread the support for new provisions and contract guidance actually is.

'As over 70% of all building contracts are under a JCT form, we have an opportunity to gain consensus from, and perhaps provide leadership to, the industry to help improve its record on sustainability,' says Professor Peter Hibberd, JCT secretary general.

A briefing paper has been produced, outlining JCT thinking on the issues and asking how contracts and guidance could best assist consultants to prioritise sustainable design features.

The paper is at [www.jctltd.co.uk/stylesheet.asp?file=29012008122025](http://www.jctltd.co.uk/stylesheet.asp?file=29012008122025)

### **£2.4 Billion And A Sustainability Push For Unis**

Details of higher education capital spending over the next three years have been released by the Higher Education Funding Council for England, with universities set to receive a total of £2.4 billion divided between its two funding streams: learning and teaching, and research. A breakdown of the funding allowance for each institution is included.

Universities are under increasing pressure to reduce their carbon emissions. Last month the Universities Secretary, John Denham, told the HEFCE that all universities should have a plan in place to reduce emissions as a condition of receiving funds. He added that performance against these plans would become a factor in their future allocations.

The HEFCE meanwhile is developing a new sustainable development action plan for the sector. One of its first initiatives will be to launch an environmental assessment methodology for higher education buildings, which is currently being developed with the Association of University Directors of Estates.

Go to [www.hefce.ac.uk/pubs/hefce/2008/08\\_04/](http://www.hefce.ac.uk/pubs/hefce/2008/08_04/) where the HEFCE funding statement and spreadsheet of individual allocations can be found.

### **Small Family House Building Company Shows The Big Boys The Way Houses Should Be Built.**

Touchwood Homes Ltd., supply pre-cut energy efficient timber frame houses to builders and self builders, their houses are constructed using I beams for walls, floors and roof, their standard wall thickness is 300mm which is filled with insulation giving an amazing 0.12w/m<sup>2</sup>k U value so that running costs are minimal.

They encourage their clients to incorporate every energy efficient technology possible, along with the super insulation; airtight construction is the basis of their build ethic. Orientation of the building to encourage winter solar gain is also a prerequisite; heat recovery ventilation needs to be installed to keep the air fresh. Solar water heating should be standard, rainwater harvesting for all uses except drinking, photovoltaic panels to generate electricity and depending on the wind regime on the site a wind turbine.

Touchwood Homes don't only supply timber frames they also erect them and their most recent one is near Braintree in Essex - Elmdale for clients Dr Roderick Williams and his wife Jenny who wanted to achieve the best possible energy performance in their new home. Their new house is super insulated to Touchwood Home's normal standard, 300mm thick Warmcel (recycled newspaper) in the walls, 350mm in the roof and all internal floors and walls to reduce noise and also act as thermal mass- Warmcel has a good G value.

Every effort was put into making Elmdale an airtight building. This is or should be standard practice in all new builds, by installing a permeable membrane on the outside of the complete building. This starts with the sole plate being sealed onto the membrane then the windows are bedded onto it and it continues over the roof, an unbroken skin, any perforations for services are run through special plates which are filled with sealant.

The beam and block floor is treated in the same way and the damp proof membrane is sealed to the sole plate making a continuous airtight layer right across the floor.

This last week the day arrived for Elmdale's air test which is now mandatory under building regulations, Touchwood Homes were not worried, they knew their techniques were effective, their own demonstration Ecohouse had just passed with flying colours. The building regulation states that a pass is an airtightness of 10 cubic metres per square metre of external envelope per hour at 50 pascals, their own house was tested and came out with a level of 2.1 m<sup>3</sup>/m<sup>2</sup>/h which was one of the best the tester had carried out, that was until he tested this latest one. He had to test it twice because he couldn't believe the result it was confirmed as 0.47m<sup>3</sup>/m<sup>2</sup>/h this must be one of the best if not the best in the U.K.

This house will not lose any heat because of air infiltration and will only need a minute amount of energy to keep warm. Whilst traditional builders are struggling to pass the building regulation for airtightness this small company are showing the way it should and has to be done if we are to have any effect on climate change.

More details are available at [www.touchwoodhomes.co.uk/](http://www.touchwoodhomes.co.uk/), or telephone Pat Wilkinson on 01279 842675 mobile 07970 119107

## **Events**

### **Sustainable Construction Knowledge Wales, 1-3 pm, Friday 7th March**

Open Seminar Economic and Social Perspectives on Sustainable Design

Room D002, D Block, UWIC Llandaff Campus, Western Avenue, Cardiff

Speakers: Dr John Littlewood, Dr Molly Scott Cato, Nick Evans MRICS.

All Welcome! This event is free of charge, but please let us know if you're coming. For bookings and further details, please contact Richard Bickle – [rbickle@uwic.ac.uk](mailto:rbickle@uwic.ac.uk) or telephone 07768 184882

### **Greener Homes And Buildings Show, Saturday 8th And Sunday 9th March**

Royal Welsh Showground, Builth Wells

Celebrity television presenter and author of It's Not Easy Being Green, Dick Strawbridge will be making a star appearance at the Greener Homes and Buildings Show, an inspirational event at the Royal Welsh Showground at Builth Wells. This stand-alone event is being funded and organised by the Welsh Assembly Government with support from the Welsh Timber Forum.

The exhibition opens with a Trade and Professional Day on Friday, March 7 for those involved in planning, designing and constructing greener homes and buildings. There will be a range of seminars and workshops. The line up of speakers includes Jane Davidson, Minister for Environment, Sustainability and Housing in Wales, who will present the BREEAM Wales award at the event.

Strawbridge will then arrive on Saturday as the exhibition opens to the general public for two days.

Packed with seminars and leading exhibits, it promises to be an unmissable event for anyone interested in greener homes and buildings.

For more information visit [www.greenerhomeshow.co.uk](http://www.greenerhomeshow.co.uk) or telephone 0845 602 4087.

Greener Homes and Buildings Exhibition, 7th March 2008 - Trade and Professionals Day, 8th-9th March 2008 - Public Days, Royal Welsh Showground, Builth Wells. [www.ghb.org.uk](http://www.ghb.org.uk)

### **Practical Microwind – An Event For Installers, 11 March 2008 9.30am – 2.00pm**

Hill Close Gardens, Warwick

A 'hands on' event for installers to include examples of freestanding and building-mounted installations. This briefing will be led by Graham Eastwick and David Hailes. Both are chartered engineers specialising in small-scale renewables and energy efficiency technologies for buildings. Encraft is a leading microgeneration specialist, working on over 400 small-scale renewables projects since 2003. The company is closely involved in the development of the small wind market through leading the Warwick Wind Trial Project, and also runs specialist training in biomass and low carbon building design.

More information at [www.warwickwindtrials.org.uk](http://www.warwickwindtrials.org.uk)

### **The Art & Science Of Sustainable Buildings, 18 March 2008 9.30am – 2.30pm**

Aston University Business School Conference Centre, Birmingham.

A half-day flagship event to help set the agenda for sustainable building design and construction in challenging and changing times. An effective and credible approach to sustainability is now a given for major construction projects. It can no longer be treated as an add-on to design and construction processes. Good quality new buildings matter for the future. The challenge for professionals is retaining scope for imaginative and innovative design in the face of increasing regulation around climate change adaptation and sustainability. This event will show you how to rise to this challenge. This flagship event is the culmination of a fifteen-month project working with eight significant public building projects across the West Midlands.

Book on the website at [www.encraft.co.uk/events](http://www.encraft.co.uk/events), email: [booking@encraft.co.uk](mailto:booking@encraft.co.uk) or tel: 01926 312159, giving your name, job title, company name and contact details. This event costs £120 + VAT per person (£141.00) including lunch and refreshments. West Midlands based SMEs qualify for a reduced rate of £60 + VAT (£70.50).

### **Eco Space – The Final Frontier. Friday 28th March, 2008 9am - 1pm**

Conference Room, Royal Bath & West Showground near Shepton Mallet.

The aim of the conference is to stimulate new thinking about how the building and landscape professions rise to the challenge of creating liveable spaces using the most up-to-date range of sustainable materials and techniques on offer whilst considering the importance of climate change and approaching peak oil production.

The speakers will explore what sustainable living spaces might look like and, drawing on exemplars from around the world, explain how lower impact building and landscaping techniques can create genuinely sustainable and liveable spaces. The conference will feature presentations and discussions on sustainability in architecture and landscaping followed by a 'question time' format with eminent professionals and decision makers.

For more information please email [admin@ecostrust.org.uk](mailto:admin@ecostrust.org.uk) or telephone Ecos Trust on: 01458 259400

For more information about the Homes for Good exhibition please see the website: [www.homesforgood.info](http://www.homesforgood.info)

### **Bio-Innovators – 7th April 2008, University of Reading**

The European Commission has recently highlighted bio-based products alongside other three other green areas - sustainable construction, recycling and renewable technologies - within its newly announced Lead Markets Initiative (LMI). The EC aim to use various policy measures to help stimulate eco-innovation in these sectors.

In implementing bio-based innovation we have a lot to learn from the natural world. Biomimicry is a key mechanism to enable this and can be defined as the way humans mimic nature in the products we build and the systems we implement. Nature has 3.8 billion years of research and development with many problems solved that human designers and engineers still struggle with. A leading thinker on biomimicry has been Janine Benyus and the video clip at [www.youtube.com/watch?v=n77BfxnVlyc&feature=related](http://www.youtube.com/watch?v=n77BfxnVlyc&feature=related) highlights many fascinating, eco-innovative examples from her work.

Bio-Innovators will bring together a number of leading thinkers and practitioners to highlight experience related to bio-based innovation and biomimetics with a particular focusing on the challenges of moving ideas through to commercialisation. Bio-Innovators will build on previous successful eco-i net events on eco-innovation, sustainable building technologies, energy harvesting, low carbon and resourceful innovators.

There is a £58.75 fee for attending this workshop, co-organised by: eco-i-net: [www.cfsd.org.uk/eco-i-net](http://www.cfsd.org.uk/eco-i-net) and BIONIS: [www.biomimetics.org.uk](http://www.biomimetics.org.uk)

### **Renewable Energy PowerGen 2008 – Optimising CO2 Emissions Reduction While Maintaining Grid Stability, 21-22 Apr 2008**

Amsterdam, The Netherlands

The European Commission is calling for 20% of the energy produced to come from renewable sources by 2020. The targets set by the EU means that power producers need to start generating from renewable sources. Combined with rising oil prices, power producers need to become less dependent on oil and look for new strategies to help them achieve the targets set by the European Commission.

With governments and a global awareness of not only the environmental impacts of burning fossil fuels, but also the mere fact that we are so heavily reliant on them, efforts to develop workable renewable energy sources have never been greater. Urgent action needs to be taken now, countries need to comply, businesses need to take opportunities of tax incentives and be ahead of the game to take full advantage of the growing renewable industry.

For more information phone 020 3002 3277 or email [SumreenR@marcusevansuk.com](mailto:SumreenR@marcusevansuk.com)

### **Carbon Footprint Supply Chain Summit 2008, 29 - 30 May 2008, Thistle Marble Arch, London**

Pre-Conference Workshop on 28 May 2008

With carbon footprinting now the basis for many corporate environmental strategies for key retailers and brands, the importance of carbon is still very much apparent. Yet, the emphasis has switched to investigating where the greatest environmental impacts are to enable companies to focus on making optimum investments throughout their supply chains. While carbon is still the driver, it is no longer the only area that companies are exploring to make investments. The environmental impacts of water, energy, biodiversity, waste and recycling, and ethics must also be analysed to implement successful reduction strategies. The question is, how do these fit around carbon impacts to ensure companies achieve the optimum mix of environmental strategies for making absolute reductions?

The Carbon Footprint Supply Chain Summit 2008 aligns over 200 senior representatives from major retailers, and brand/product manufacturers including Duchy Originals, Morphy Richards, GSK, Fiji Water, Cadbury Schweppes, Waitrose, B&Q, McDonald's, Marks & Spencer, The Co-Op, McCain Foods, Kimberly Clark. We will bring leading research from Cranfield University on water, Wageningen University in The Hague on raw materials. All are actively looking for the tools and advice to deliver clear and consistent carbon and sustainability messages.

The agenda and full list of speakers and topics are now available on the Summit website at [www.carbonfootprint-supplychain2008.com](http://www.carbonfootprint-supplychain2008.com).

### **Global Leakage Summit – 17-18 June 2008, Thistle Marble Arch, London**

Pre-Conference Workshop on 16 June 2008

Now a firmly established event on the calendars of international utility practitioners, the Global Leakage Summit will provide the water industry with the opportunity to debate the latest challenges - and to share solutions - and hear an incredible line up of practical case study presentations.

The programme has again been compiled from a unique research process and face to face interviews with practitioners to identify the 'hot topics' that they would like to hear discussed. One of the key themes of this year's Summit is to address the management of change in utilities to improve efficiency and performance. Keynote speakers representing utilities like Rand Water, Aguas do Porto, Johor and the Bahamas - who have all demonstrated success from change - will present their results.

The agenda and full list of speakers and topics will be available shortly on the Summit website at [www.global-leakage-summit.com](http://www.global-leakage-summit.com)

## **Courses**

### **Postgraduate Courses At The Centre For Alternative Technology's Graduate School Of The Environment**

The Graduate School of the Environment (GSE) offers a range of inspirational post-graduate programmes. A unique combination of leading professionals, academics and authors create innovative solutions at Europe's leading Environmental centre. As well as providing information and interactive displays to the public, CAT has been host to courses and consultancy for universities, business, local government and NGOs for over 30 years. Courses offered are:

- MSc Architecture: Advanced Environmental and Energy Studies (AEES)
- MSc Architecture: Advanced Environmental and Energy Studies (AEES) by Distance Learning
- MSc Renewable Energy in the Built Environment (REBE)
- Professional Diploma in Architecture with Advanced Environmental and Energy Studies

For more details: [www.cat.org.uk/graduateschool](http://www.cat.org.uk/graduateschool)

### **MSc in Sustainable Futures, Robert Gordon University, Aberdeen, To start Autumn, 2009**

Applicants will be from, or have an interest in, the built environment and will wish to gain the new skills required to plan, develop, design, assess or construct sustainable, low carbon, housing in the 21st Century.

Discussions are ongoing with Findhorn Foundation to spend time there studying ecological communities and design as part of the taught course.

Aim: to create the thinking, awareness and analysis tools to continuously develop and challenge the methodologies and received wisdom for creating sustainable housing. The development of communities will be examined in a broader context to the more technical solutions of the physical built environment. The course is designed to address the shortage of skills in this area, which has been identified by professional bodies.

Based at the RGU, either full-time or part-time.

Further details are available on the web site: [www.rgu.ac.uk/sss/courses/page.cfm?pge=44675](http://www.rgu.ac.uk/sss/courses/page.cfm?pge=44675)

## **Publications**

### **Earth Masonry - Design And Construction Guidelines, Tom Morton, Arc Architects**

Publisher IHS BRE Press, Reference EP80, ISBN 978-1-86081-978-0, Price £35.00 Subscriber Price £25.00

Earth masonry is the one of the oldest and most widespread building materials. Though technologically simple, it can produce a durable architecture of considerable artistic sophistication, and buildings that are appropriate to their climate and suited to a wide range of uses. A timeless construction material, earth brick has an important technical role to play in the current exciting phase in the development of ecological architectural technology. Humidity control, low embodied carbon and near zero waste are key characteristics of earth buildings, but all involved in design, construction and use of buildings need guidance on using this unfamiliar material in the modern construction industry.

This book fills in the considerable gaps in our understanding of earth masonry, with a factual account of technical, design and construction issues. It also explores the cultural background to earth masonry, with an enthusiasm for the subject born of conviction for its potential, even for sizeable projects. It gives technical details as well as practical guidance and is extensively illustrated.

Go to [www.ihsbrepres.com](http://www.ihsbrepres.com)

### **Putting A Price On Sustainable Schools, Anna Surgenor And Ian Butters**

Publisher IHS BRE Press Reference FB15, ISBN 978-1-84806-019-7, Price £25 Subscriber Price £17.50

This report will provide an understanding of the cost benefit implications of building to BREEAM ratings and low/zero-carbon standards. One of the principal barriers to the wider adoption of more sustainable design and construction solutions is the perception that they may cost much more. Evidence collected by BRE and Faithful+Gould disproves this assumption. This BRE Trust-funded report identifies the additional capital costs associated with a range of sustainable and low- or zero-carbon solutions for a primary and secondary school, demonstrating that significant improvements in the sustainability performance of a building can be achieved at little additional cost. This information is critical as the government drives forward the construction of sustainable schools.

Go to [www.ihsbrepres.com](http://www.ihsbrepres.com)

*If you have any news, events or courses you would like to publicise in Network then please email details to [network@aecb.net](mailto:network@aecb.net), or post to Chris Lord-Smith, y Graig, Llidiart-y-Waen, Llanidloes, SY18 6JT.*