

re:news

the newsletter of Ecos Trust



Another opportunity to attend our highly-praised conference as it heads to the South East in June.

Due to high popularity and excellent feedback, we will be re-running **The Road to Zero Carbon** conference – this time at Reading Town Hall, Reading on 15th June. Fee: £180 plus vat.

The conference will focus on new Government targets to significantly reduce CO₂ emissions from all buildings, whether residential, commercial or public, new or existing.

The targets are for all new buildings to be zero carbon within a decade, starting with a 25 % reduction in CO₂ emissions next October, while CO₂ emissions from existing buildings need to be approaching zero by 2050.

We are now seeing a move from demonstration projects to an increasing number of real world low and zero carbon

Secure your place at the conference: book online at www.ecostrust.org.uk
(You can also download a conference programme and printable booking form from our website)

Read a review of **The Road to Zero Carbon** conference (South West) • *see page 4*

buildings being built, demonstrating that it is already possible to achieve significant reductions in carbon emissions.

This conference will showcase some of the best of these low and zero carbon projects, with a strong focus on the steps and measures taken and the impact on the construction process, providing delegates with a unique opportunity to learn from those at the leading edge of compliance with this fast approaching standard.

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> education + events

Training on planning and climate change

With our Devon Sustainable Building Initiative (DSBI) we have become part of a consortium that has been selected by SW Councils (formerly the SW Regional Assembly) and Regen SW, the region's sustainable energy agency, to develop training materials for local planning authorities on planning and climate change. This work is part of a wider project which included the development of an online tool on planning and climate change for local authorities.

Training materials have been developed on a range of topics and are being piloted with several different local authorities across the region. Gareth Walton, Director of the DSBI, recently delivered a day's training on sustainable energy solutions for individual buildings and whole developments for Wiltshire Council together with Mary Anderson from CAG Consultants, who are leading the project consortium. The training was very well received, with 95 % of participants rating it useful or very useful.

If you are from a local authority and are interested in the training on planning and climate change, please contact Mary Anderson from CAG Consultants on ma@cagconsult.co.uk or telephone 01892 619070.

Ecos conferences and events for 2010 • see page 3





Stawell

Having successfully sold two of the five Code 5 houses and completed a 4-bed showhouse at Stawell last Summer, we experienced some rather unfortunate but not entirely surprising, recession-induced inactivity on the site during the latter half of the year. However, as the market began some signs of marginal recovery in the early part of 2010, work on the two remaining houses recommenced in March with completion expected for the end of July. Ever the resourceful, the tools down period didn't go to waste as the half finished houses and the showhouse served as an extended educational opportunity in the form of additional guided tours for professionals and open days for the public. Since May last year we have provided tours for over 300 building professionals including architects, planners, quantity surveyors, builders and developers. Over 100 members of the public have visited the houses and around 60 construction students have used the houses as a learning resource. This has provided a valuable and rare opportunity for many to hear the honest yet often undisclosed experience of building to The Code. At the same time, the photovoltaic panels, which were installed on the houses during 2009, were merrily absorbing what the winter sun had to offer, generating saleable electricity for us.

Keeping it hot

March 2010 saw the start of a cutting edge Co-Heating Test (Heat Loss Test) on number 4, the 4-bed detached house.

The Co-Heating Test, alongside a raft of other post construction testing, has been

update

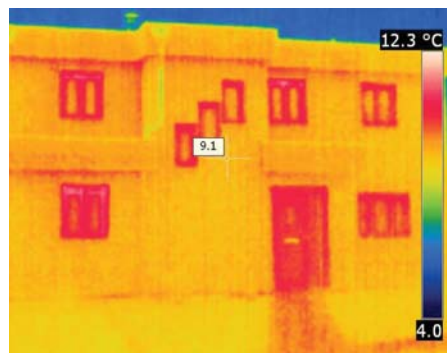
The Old Apple Store, Stawell

Plot 1	(three-bed terrace) under construction
Plot 2	(three-bed terrace) under construction
Plot 3	SOLD
Plot 4	SOLD STC
Plot 5	SOLD

carried out by the Department of Architecture at Oxford Brookes University, in collaboration with the Good Homes Alliance. The results gained and techniques used, were presented to a group of 20 at the Old Apple Store in April.

The tests have allowed the calculation of the heat loss parameter of the completed house and an understanding of the heat loss mechanisms acting on the unit. This can then be compared with the design values and the learning can be fed back into the design process to inform the next development.

The Co-Heating Test measures the energy required to keep the unit at a steady state, at 25°C, over at least 2 weeks. Alongside this,



Thermal imaging of the front of No. 4 during the heat test shows a uniform temperature across the building and reflecting the temperature of the surrounding ground.

other tests include pressure and de-pressurisation testing, tracer gas and thermographic imagery to illustrate the heat loss paths.

The early results from the first week of the Co-Heating Test show that the amount of heat being lost through the building envelope (111W/K) is about a third less than predicted (166W/K) by the design stage Standard Assessment Procedure (SAP 2005). The SAP calculations are carried out as part of the design and compliance for building regulations and Code for Sustainable Homes Level 5 standard where W/K represents the amount of energy needed to heat the house by just one degree K difference between the outside and inside temperature.

The actual heat loss is lower than predicted because the level of air tightness calculated by the SAP is worse than it is in reality. The design stage SAP predicted an air permeability of 10 cubic metres moving through an average square metre of external building fabric each hour. In fact, the air tightness test carried out on site (just before the Co-Heating Test) revealed the permeability was only a quarter of this level at 2.59 cubic metres. Once the correct air tightness levels are put back into the SAP calculation, the initial results become remarkably close to the predicted results, with only a 3 W/K difference between the two figures. These early results are still subject to verification after further analysis, but they are very promising at this stage. The results show that, unlike most housing, the houses at Stawell have been built to an even higher standard than they were designed, underlining the care and attention to detail shown by the Ecos Homes building team.

Carhampton

Whilst we have had a number of development sites under our Ecos Homes wings, we are keeping them on hold to allow us to focus our attention on our site in Carhampton, West Somerset. Our chosen architects for this development are Stride Treglown based in Bristol. Many of you will be familiar with the name due to their previous work at Great Bow Yard in Langport and we are looking forward to working with these architects again.

The Carhampton development will be carried out in two phases:

- Starting towards the end of 2010, **Phase 1** will comprise 16 affordable houses in conjunction with a housing association – as yet unselected. The majority of phase one will be not-for-profit but will include two houses for the open market.
- We aim to start **Phase 2**, which will comprise 14 open market houses, in 2012.

Community support

Bridport Co-housing

Despite the recent slump in house prices, building plots are still out-pricing many would-be self-builders. We recognise the benefits that self-builders can bring to the quality of the homes they build and in an attempt to support those who wish to build their own homes but cannot afford to purchase individual plots of land, we have spent the past year researching co-housing opportunities. In particular, we have provided support to the development of the co-housing group in Bridport, developed a supportive relationship with the planning authority in West Dorset and are currently in discussions with landowners about potential sites for co-housing schemes.

What is co-housing?

Co-housing is a way of living which brings individuals and families together in groups to share common aims and activities while also enjoying their own self-contained accommodation and personal space.

Co-housing communities are a means of compensating for the alienating effects of modern life where neighbours don't recognise each other and where day-to-day collaboration is minimal. They offer particular benefits for children in terms of secure play-space and shared activities with their peers. Older people can also find companionship and mutual support in such communities. The main features of co-housing communities are:

- They are set up and run by their members for mutual benefit.
- Members are consciously committed to living as a community.
- Developments are designed to encourage social contact and a sense of neighbourhood among members.
- Common space facilitates, shared activities like community meals and other amenities like laundries, heating systems, guest rooms, transport, etc may be shared.

Taken from the UK Co-Housing network: www.cohousing.org.uk.

This website is well worth a visit if you would like to see the groups that are running or developing in the UK, as well as a whole host of resources for those interested in co-housing.

Glastonbury's Red Brick Buildings

Ecos has formed a strong partnership with a new community enterprise which has been set up to protect and manage some of the old buildings on the former Morlands sheepskin factory site on the edge of Glastonbury.



Ready to be revitalised – the Red Brick Buildings on the former Morlands site in Glastonbury

Following on from the support given by SWRDA for the refurbishment of Great Bow Wharf, we have an agreement from the RDA to undertake further research to show how this project could be made into an exemplary regeneration project. The buildings, now known as the Red Brick Buildings, will become a centre for contemporary culture, social enterprise and sustainable building. Support from Somerset County Council and Somerset Community Foundation means we can now do the full feasibility study and business plan needed to secure the investment required to refurbish the building ready for the first phase to be opened in 2011.

Sustainable Communities Conference

The sustainable communities conference formed the morning part of an all day two part conference in Exeter in July last year. The morning focused on some of the key neighbourhood and development-scale issues when it comes to creating sustainable communities such as transport, green infrastructure, the public realm, energy generation and community involvement. It focused on the challenges that arise when considering these issues and the solutions that exist to overcome them.

Expert speakers provided examples of best practice and the latest thinking in each of these areas.

The afternoon focused on the latest developments in the low carbon refurbishment of existing homes.

Around 160 people attended the conferences and included local authority officers and councillors, architects, chartered surveyors, housing association officers, energy suppliers, private sector consultants, and third sector environmental officers and managers.

The event was organised by Ecos and the Devon Sustainable Building Initiative (DSBI), which is hosted and supported by Ecos, on behalf of Constructing Excellence SW and Future Foundations.

To be kept informed of all our events (by email) please send an email to corina@ecostrust.org.uk putting 'EVENTS' in the subject box.

The Road to Zero Carbon conference

15th June, 2010 • 9.30 – 4.30

Reading Town Hall, Reading

Fee: £180 plus VAT

See main article on page 1 for more information, or log on to our website to download a programme and booking form.

You can also book online at:

www.ecostrust.org.uk

Sustainable Refurbishment conference

October 2010 (dates tbc)

The Watershed in Bristol

Bespoke training and events

We are always happy to run bespoke training and events on a wide range of sustainable building issues. If you have a requirement for training or a particular event, please let us know.



Help us to build a better future...

By joining Ecos Trust as a corporate member, your company will be supporting us to keep driving the industry towards a sustainable built environment through events and education. Importantly, this not only aids understanding of the most up-to-date products, services and policies, but will ultimately serve to increase demand and supply within the sustainable building industry.

Additionally, corporate membership gives all members of staff in your company a 10% discount on all our events.

If you would like to know more about joining your company as a corporate member, please contact Corina on 01458 254349 or email corina@ecostrust.org.uk.

Since the official launch of our buildings refurbishment service at the Homes for Good exhibition in April 2009, Ecos Renew has gone from strength to strength.

Assessments involve a site visit to survey the property and, most importantly, a discussion with the householders to understand their particular aspirations and constraints (including financial). A variety of properties have been visited over the past year ranging from a large hotel in Cornwall to a small terraced property in Minehead. Ecos Renew is now also providing contracted expert advice to properties where sustainable refurbishment is underway.

Our focus is continuing to grow, particularly in the areas of both individual large properties and groupings of smaller properties to maximise our impact on existing buildings whilst providing the most viable returns for the Trust.

To develop the assessment market for groups of small buildings, detailed partnership arrangements are being progressed within the cities of Plymouth, Southampton (see below) and Bristol.

Pilot retrofit in Hampshire

Back in the late summer of 2009, Ecos Renew, with Southampton City Council, won a joint bid from the Technology Strategy Board. This was for a pilot project to examine the practicality of retrofitting a typical residential property so that the energy use could be drastically reduced and the house achieve near passive house standards. This work involved modelling high standards of airtightness and insulation followed by appropriate heating systems and renewable energy technologies. The energy modelling was done with the assistance from colleagues of Brilliant Futures – an energy assessment consultancy based in Wroughton and also academics from Southampton City University. It was found to be possible to retrofit the house so that these targets could be achieved using for example, floor, wall (external) and roof insulation plus photovoltaic and solar thermal technology. A further consideration was for the building works to be specified in such a way as to allow them to be undertaken by small local companies and labour force to maximise the sustainability of the programme.

Building on this experience, we are now discussing with the City Council, the possibility of carrying out a wider retrofit project for a group of houses within the city.

For more information about Ecos Renew, please visit our website or contact Jim on 01458 254271

The Road to Zero Carbon

A conference on low and zero carbon buildings

This highly rated conference was organised by Ecos Trust and our Devon Sustainable Building Initiative which is hosted and supported by Ecos. The conference was held at Bristol's Watershed on the 9th February, 2010.

The conference was supported by CIOB, Future Foundations, South West Councils, the UK Green Building Council, the Zero Carbon Hub and the South West RDA

Nick Gardner, Senior Consultant at SQW Consulting and co-founder of ProjectDirt.com provides a summary of the days event:

At 9.30am on a crisp winter's morning The Watershed in Bristol played host to over 160 of today's top thinkers in sustainability, who came together to hear about and discuss 'the road to zero carbon'. A packed programme of speakers covered a range of topics relating to low and zero carbon building and design, drawing on examples from homes to schools and offices.

Broadcaster and designer (and Chair for the day) Charlie Luxton began proceedings with characteristic positivity, expressing his excitement about what he sees as a 'new phase' of actual and tangible activity taking the building industry forward from the rhetoric of yesterday to the delivery of tomorrow's zero carbon buildings.

The impressive line-up of speakers was kicked off by Paul King, Chief Executive of the UK Green Building Council and Chairman of the Zero Carbon Hub, who outlined the move towards agreement on a regulatory framework for zero carbon building, the emerging definition of what this means in practice and providing positive feedback from his meetings with industry about their willingness to engage with the agenda. Next up on the stage was Ben Cook of Barratt Homes who introduced their response to the Government's 'Carbon Challenge' competition: the 195-home development at Hanham Hall in East Bristol. Cook talked through how the firm had risen to the challenge of responding to a tough set of stipulations across a range of standards and provided some early emerging lessons from the project. Last in the morning session was

Gareth Davies from Stride Treglown Architects who presented the firm's approach to low carbon building, drawing on examples of their experience nationally and, in particular, the lessons learnt from the design of their own Cardiff office to meet the demanding BREEM Outstanding Standard.

Following a noisy lunch full of debate, the session resumed with Carmel McQuaid, Climate Change Manager at M&S who presented the firm's approach to reducing carbon emissions in new and existing stores and factories, including the launch of a rolling programme of 'Learning Stores' focusing on energy efficiency. Vic Ebdon of Devon County Council followed with an interesting presentation on the pathway 'Towards Zero Carbon Schools'. He presented the five-point strategy towards zero carbon schools outlined in the recent report from the Zero Carbon Schools Taskforce, and argued for better sharing of learning between public sector partners as the Building Schools for the Future programme continues. The series of talks was rounded up with an inspiring and challenging talk from Bill Dunster of ZEDfactory. Dunster, not one to shy away from bold statements, outlined his vision for how to achieve zero carbon housing at scale, using a standard 'box' approach to building to Code Level 6 with materials he envisages being readily available from the local outlet of Jewsons.

In wrapping up the mood of the day, Charlie Luxton thanked the presenters for a range of inspiring ideas and reminded the audience of the need to exploit every available niche in moving along the road to zero carbon. With evidence from the examples provided on the day, it is clear that this won't be an easy road to travel, but it is one to which we are now committed and there is much appetite to work together in tackling the challenge head-on.

Don't miss out!

There will be another opportunity to attend **The Road to Zero Carbon conference at Reading Town Hall in Reading on 15th June, 2010.**

Book online or download a conference programme and printable booking form: www.ecostrust.org.uk

This newsletter is produced by Ecos Trust.

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