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UK SDA Autumn 2008

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The UK Sustainable Development Association has been formed to promote the need to make better use of the earth's resources, to avoid their depletion and the changes to the climate that results.

Recognising Excellence

The UK Sustainable Development Association is pleased to announce the introduction of a new award scheme aimed at recognising excellence in sustainable construction.

This member-led scheme is open to all projects where the developer or their client has demonstrated a creative approach to the use of sustainable technologies and techniques to reduce the carbon and water usage footprint of their projects.

Nominations for a UK-SDA Excellence in Construction Award can be made by any Association Members, or by the project client themselves.

The award criteria are flexible, to reflect the many alternative ways in which new or existing buildings can be made more sustainable, but will generally be looking for projects that are at least 100% better than Building Regulation Part L (2006), or are in some other way worthy of recognition

Pictured is award winning Stoke Park School and Community Technical College

Happy Birthday .....

As the UK-SDA approaches the anniversary of its formation, founder-members can look back with quiet satisfaction on a year in which all the formalities of establishing the Association have been completed, the website and discussion forum launched, and display materials purchased. As noted above, an award scheme has also been successfully launched, setting the scene for a formal launch and drive to expand the membership early in 2009. Happy birthday .....

Code for Sustainable Homes

Faber Maunsell has been contracted by Communities and Local Government (CLG) to assist a review and eventual modification of the Code for Sustainable Homes (see www.planningportal.gov.uk).

The review and proposed changes are necessary to reflect planned amendments due in 2010 to Part-L of the Building Regulations to meet the energy standards set out in the Code Level-3.

Once the amendments have been made, Code levels 1&2 for the Energy Category will be below minimum national standards. This means that essential changes need to be made to the Code; the review will therefore also provide an opportunity to consider other beneficial changes.

Options

There are a number of options for revising the Code, with initial industry evidence calling for only minor changes in 2010, leaving any significant changes needed for later years. This reflects the relatively short time the Code has been in use and limited practical experience.

The changes thought to be necessary are often technical in nature and will need significant time and understanding to evolve a durable long-term Code

Review Process

Consultation meetings are being held with stakeholders such as designers, house builders, Code assessors , product manufacturers and Local Authorities. Feedback is being invited either directly at the meetings or via e-mail to thecode@communities.gsi.gov.uk.

Feedback

Comments on the Code are being gathered on two main levels, namely:

- General areas of the Code deemed to need modification to avoid confusion or conflict with Building Regulations
- Specific detailed changes thought necessary to avoid problems, identified as a result of experience to date

Progress

Ideally, the review wishes to focus mainly on the general level as far as possible, although feedback on specific or technical details are also welcome as they may also illustrate a need for higher level changes. Areas of interest identified so far, include:

- Energy revisions to align with Part L
- Changes to water requirements
- Simplification of assessments
- Areas where credits are not being used
- Introduction of intermediary levels

AWARD WINNING EDUCATION CENTRE

Idle Valley Rural Education Centre results from a combined concept of North Nottinghamshire College and the Nottinghamshire Wildlife Trust.

A recipient of the UK-SDA's new Special Merit Award, the facility serves as a rural education centre for the College during the week, and as a visitor centre for the nature reserve in evenings and at weekends

Completed in March 2008, the project is set in the beautiful Idle Valley Nature Reserve and has been benchmarked for a BREEAM Excellent rating.

Along with energy reductions achieved through passive design features, the project includes:

- A lake source heat pump
- Photovoltaic roof tiles
- Solar heating
- Rainwater harvesting

Along with careful selection of the building envelope, exceptional insulation levels and an "air-tight" structure, these features improve CO_2 emissions for the project 50% over current Building Regulations.

What the members say

The UK-SDA's first annual survey of members views highlights the good start made in successfully establishing the Association … and also the hard work ahead if its aims are to be met …

The aim of the survey was to make sure that activities undertaken by the Association are fully aligned with the wishes of its members.

The responses to the survey indicated that members want the Association to provide a focus for the interests of sustainable development, and to help to influence public opinion and government policies in this respect. Needless-to-say, they also look to the UK-SDA to help them to develop their own businesses and to increase the market take-up of associated technologies and services.

In terms of progress to-date in the above respects, members indicated a reasonable level of satisfaction with what has been achieved organisationally in the first year, but would now like to see the Association focus to switch to delivering its main aims; this involves reaching a wider and ever increasing audience.

Members would also like to see the Association devote more energy to encouraging the science of, and research into, sustainable development, promoting industry standards and guidelines, and disseminating information more widely.

Meanwhile, the direct benefits of membership, such as use of the logo, website listing, enquiry and networking referrals, and publicity via press releases are thought to be good value at the current annual subscription level

The award winning Richard Morris Building extension to Loughborough University Business School

Playing by the Code

Although dedicated to its implementation, the Good Homes Alliance is nevertheless questioning whether in its current form the Code for Sustainable Homes may be counter-productive by seeking to go too far, too fast

The Good Homes Alliance brings together a range of stakeholders interested in implementation of the Code for Sustainable Homes, including a number of house builders pledged to meet Levels 3&4 of the Code.

At its most recent meeting, however, debate focussed around whether in its current form the Code was meeting its intended purpose, or might be inadvertently acting as a deterrent to the house building industry by pursuing aims set too high and too early.

In a well-attended debate, delegates from across a wide spectrum of the house building industry expressed strong reservations about the CSH, particularly where delivery of Levels 5&6 are concerned.

The cost of compliance at these levels, coupled with the bureaucracy of the assessment process served to ensure that less than a dozen houses had been registered to this level to-date.

To accelerate the delivery of higher, better performing homes, the consensus of those present was that attention needed to be paid the current definition of a "zero carbon" as applied to the CSH, and the balance of environmental advantage between on/near site production of renewable energy and off-site production.

For the time-being, industry experts see levels 3&4 of the Code as the best that can economically be delivered once the current down-turn in the industry abates.

Meanwhile, equal attention needs to be paid to reducing the energy consumption of the existing housing stock, the vast majority of which will still be in service throughout current national planning timeframes.

Ground-source heating & cooling

Ground-source heating and cooling (GSH&C) systems are a straightforward way of helping to reduce the carbon footprint of your next project—and it works even when the sun is not shining!

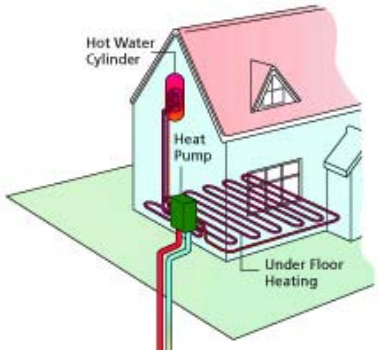
Basic Principles

Ground source heating and cooling (GSHC) involves the recovery of low grade heat from the ground or the disposal of heat from a building into the ground, usually utilising a heat pump.

In the UK the temperature of the soil and upper few 10s of metres of rock are at a remarkably constant temperature, equal to the average air temperature at that latitude. The majority of this heat energy is provided by the sun with only a very small amount coming from the Earth's interior.

GSHC systems can be designed to provide a few kilowatts (kW) of energy for a home, with up to several mega-watts (MW) of energy for commercial and industrial schemes.

The fundamental science behind ground-source design and heat transport in the ground, is directly analogous to groundwater flow. In fact commonly



used groundwater analysis is based on heat flow theory. The assessment of risks associated with GSHC is therefore an extension of hydrogeology.

System Types

There are two basic GSHC systems:

- ***Open loop;*** Water is pumped from a borehole to a heat pump or heat exchanger. In heating mode thermal energy is extracted from the water within the heat pump cycle. The cooled water is then re-injected to the aquifer or disposed-of to the environment.
- ***Closed loop.*** Heat and/or cool is exchanged with the ground via plastic pipes filled with a carrier fluid. The pipes can be installed horizontally in trenches, in boreholes or in a lake. The length of pipe required to provide sufficient 'ground-source' depends on the building's seasonal heating/cooling characteristics and the properties of the rock.

For more information visit www.uk-sda.org/PDF/GSH&C.pdf

Last but not least ...

Pictured is another UK-SDA Merit Award winner, the Conkers Youth Hostel based in the heart of the national Forest in Leicestershire.

Built to give children from throughout the UK access to the forest, the building is constructed from local sustainable materials and features the use of renewable energy technologies, including:

- Woodchip boilers
- Solar Heating
- Rainwater harvesting

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