

Sustainable Homes

Ministerial Backing for Earth Sheltered Housing

Sustainable Homes is going high tech!

From the new year you will be able to download these newsletters direct to your PC. Information on case studies, seminars, policy papers and other links will also be available on our new website. The address is www.sustainablehomes.co.uk

Thanks to the Housing Corporation for their continued support. Thanks also to Anchor Trust, Nottingham Community Housing Association, Hartvale Housing Group Ltd, London and Quadrant Housing Trust, Devon and Cornwall Housing Association and Moat Housing Group for their sponsorship of the site.

A new initiative under the Sustainable Homes banner is the Affordable Water project. More information and contact details for this inside.

Also launched this month is the EcoDatabase of Environmental Residential Projects, produced by Sustainable Homes and ECD Energy and Environment.

For further information or to add you name to the mailing list please contact Wendy Shaw, details on page 4.

Hockerton Housing Project, the first earth sheltered, self sufficient ecological housing development in the UK, has been officially opened by Nick Raynsford MP (Construction Minister). The launch took place on Tuesday 27th October 1998.

Sustainable Homes first visited the Hockerton project in November 1997. The visit to Hockerton and to the Vale's autonomous house were part of the Nottingham event in the Sustainable Homes seminar series.

It was fascinating to see the houses now complete and occupied.

It was quite a different place to the grey, muddy building site we visited back on that dull November afternoon.



Sadly there was still no wind turbine on the horizon though, this part of the battle is still being fought! See over for full story.



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Hastoe

THE HOUSING CORPORATION

Sustainable Homes and this newsletter are supported by an Innovation and Good Practice Grant from the Housing Corporation

Creating a self build community

The project consists of five terraced houses on a south facing slope. There is a solar conservatory on the south aspect, the impressive interior of which can be seen in the photo opposite, whilst the other sides are earth sheltered and the roof covered by a layer of soil.

Designed by Brenda and Robert Vale they utilise a single repeating element throughout. The materials and technology utilised in the design are simple. This enabled the Hockerton Housing Partnership to self-build providing about half the total labour input. In addition to building their

To develop a holistic, non-polluting way of living to work in harmony with nature; an evolving dynamic process that seeks to evaluate and implement the most appropriate sustainable systems available.

own homes the group of occupants have agreed to contribute to their community through car sharing, working on communal land to produce organic food and commit to general management of land and water.

The design of the houses aims to reduce the need for energy use. They are very highly insulated and the earth sheltering acts to reduce radiant heat loss in cold weather. Internal temperatures are expected to remain in the comfort zone of 19 – 21°C all year round. The south facing conservatory also provides a similar buffering effect to the front of the houses. The small space heating requirements of the houses are met by solar gain and heat generated by occupants and appliances.

Drinking water for the houses is rainwater collected from the conservatories and the barn.

This is then stored and treated before being pumped back to the houses. Warm water is provided via a heat pump that utilises warm air from the conservatory apex. The hot water tank then acts as an energy store and can supply hot water for up to six days without the need for heating. Waste water is dealt with via the reed bed on site.



Current energy use is approximately 10% of conventional houses. Many aspects of the project such as energy use, air quality and buildability are being monitored by the Building Research Establishment. Sustainable Homes will bring you an update once sufficient data has been collected.

Comprehensive information packs are available on the project. These cost £13. It is also possible to organise visits to the scheme if you would like to see it for yourself. These have to be booked in advance and can usually only fall on a Sunday. Contact Nick White for more information. Tel : 01636 816902 e-mail : hhp@hockerton.demon.co.uk Address: 2 Mystery Hill, Gables Drive, Hockerton, Near Newark, Notts NG25 0QU

WORLD HABITAT AWARDS Call for Entries 1999



Projects are sought in both developed and developing countries, which offer sustainable futures to residents and which provide practical and imaginative solutions to current housing problems.

All innovative housing solutions welcome, large or small, urban or rural.

Prizes of £10,000 plus individually designed and crafted silver trophies are given to the two winners.

Preliminary submissions should reach the address below before 1st July 1999.

Further details are available from:

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Eco Database

ECDC Energy and Environment and Sustainable Homes on behalf of the Housing Corporation have prepared a database of environmental housing projects providing examples of environmental housing for designers.

The aim of this project, which the Housing Corporation has sponsored, was to provide examples of environmental projects and the environmental features in their design. Examples in the database include projects built, under

construction and at design stage. To ensure the database develops and continues to be of relevance, it will be updated at regular intervals.

Often the problem when designing environmental features is a lack of knowledge and confidence. To help designers, the database also lists sources of further information and a point of contact so projects can be discussed.

The program is a vital step in enhancing the uptake of

Plastic.....Fantastic?

Greenpeace has long campaigned against the use of PVC because of its serious long-term effects on the environment. These environmental impacts are now well documented and the pertinent question has become; are the alternatives effective and economic?

Nowhere is this question more hotly debated than with regard to window frames. High profile marketing campaigns have ingrained PVC windows as "maintenance free" in the public consciousness.

On the other hand timber has a reputation for high maintenance. In the past timber windows were often poorly designed, not weather sealed, not properly treated and would often trap water.

The dramatic improvements in timber window and preservative technology mean that this reputation is no longer just.

There is an increasing number of companies supplying high performance softwood windows that once installed don't need to be touched for up to ten years.

Thereafter, a five year painting or staining cycle is the norm. This compares very favourably with PVCu.

Dulux have brought out a PVC window paint recommended for use every six years. This should raise suspicions that the "virtually no maintenance" claim for PVC is largely advertising hype. In fact PVC tends to yellow with age, becomes brittle and can develop hairline cracks due to the action of sunlight.

Discoloration is exacerbated by dirt retention. Seals are liable to early

failure because of the excessive expansion of PVC. It is much less resistant to impact damage than wood and is more difficult and expensive to repair - (drilling of holes for TV aerials is commonly cited as a problem by local authorities).

Significantly, the Housing Association Property Mutual (HAPM) demand regular maintenance of PVCu windows to qualify for their guarantee.

This includes cleaning every six months, lubricating and adjusting annually and renewing weather stripping and gaskets every 10 years.

Perhaps surprisingly, high quality timber windows compare favourably with PVC in terms of cost. In April this year Carlisle City Council compared the costs of installing high performance double glazed softwood windows with PVCu.

They found PVCu to be 25% more expensive. Carlisle follow a five year maintenance cycle using water based stain. They have fitted 30,000 windows since 1990 and John Hughes in their Housing Department can't remember them ever having to do

any splicing or section replacement because of rot.

The minimal repairs they do need to do are usually down to vandalism.

Carlisle gave both window types a life expectancy of thirty years.

A good timber window will only just be entering adolescence at thirty. I don't know of a thirty year old PVC window, but if I ever see one I wouldn't mind betting it will be a pretty sorry sight.

For more information on the environmental aspects of PVC, performance and suppliers of alternatives contact Mark Strutt at Greenpeace on 0171 865 8226.



environmental issues in the design of residential projects in the UK. The database will provide a network of contacts which to date has been missing.

James Walker from ECD Energy & Environment said "I have been amazed by the positive response and the amount of feedback we have received, it is a reflection of how quickly environmental issues within the housing market have developed. There are a lot of innovative and exciting ideas out there which people want to share".

The database is being supplied to those who provided data for the program along with 200 Housing Associations and will also be available to purchase at low cost, alternatively the programme can be downloaded from both

<http://www.sustainablehomes.co.uk> or
<http://www.ecde.demon.co.uk>.

For a copy of the database, or if you have any projects which could be included in the database, please contact either James Walker at ECD Energy and Environment or Wendy Shaw at Sustainable Homes.

ECD Energy & Environment Ltd
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London
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Flushed with success

Adrian Cridge has been appointed as the National Project Officer for the Affordable Water initiative.

He will be raising awareness, and offer water conservation training to Housing Association staff. This is passed on as advice for the benefit of low income families, especially those with metered water.

Funded by the Housing Corporation's Innovation and Good Practice Grant (IGP) programme, the project is sponsored by Hastoe Housing Association. It follows on from the report on 'Affordable Water' [published by Hastoe last year]. This report shows that some tenants in certain areas of the country can pay more than £500 per year for water and sewerage charges.

The initial stages of the project take place in the South West and other high cost water areas.

The longer term aim is to develop a national training programme for Housing Association front line staff enabling them to advise residents on water conservation and determine appropriate ways in which to deliver low cost solutions.

Adrian has spent most of his working life in the building industry. The first few years were spent in project management, followed by several years in a contractors training department. This eventually led to his main career as a lecturer in built environment studies in Higher Education.

His increasing interest in environmental issues led to him joining Bristol Energy Centre as a trainer, where he developed programmes in energy conservation.

Much of the work was concerned



Adrian Cridge

with no-cost/low cost solutions to fuel poverty in the domestic sector.

More recently he has been self employed, training energy rating assessors as well as delivering programmes for the Chartered Institute of Housing and private clients.

Whilst not entirely ignoring low cost technical fixes, much of his recent work has focused on the need to raise awareness in order to change behaviour that in turn leads to reduced consumption.

This approach now continues as a result of joining the Affordable Water project at Hastoe.

For more information contact Adrian Cridge at Hastoe Housing Association, 24 High West Street, Dorchester, Dorset DT1 1UW
Tel:(01305)250103.

Green Reading

Environmentally Friendly Cities

Proceedings of the 15th Passive and Low Energy Architecture (PLEA) conference, James and James (Science Publishers) Ltd., London, 1998.

Generally this weighty book is a little too technical to make easy reading. It does, however, offer insights into where we should be going and how planning and design need to change in the future.

It has useful sections and covers a diverse range of subjects from urban planning, building energy and environmental analysis, legislation and technology transfer.

As a pick and dip reference book to inspire and in parts because it serves its purpose. Particularly interesting are international schemes ranging from an 'energy self sufficient house in the Northeast of Brazil' to 'experiences with 'Green Roofs' in Switzerland'.

Green Digest

The *Green Building Digest* is a quarterly publication. It is a guide to building products and their impact on the environment, taking a different aspect of building in each issue.

The research is carried out jointly by Queen's University and the Ethical Consumer Research Association. Due to a change in circumstances with the previous publishers (ACTAC - The Technical Aid Network), the publication of the Digest has been transferred to Queen's University, Belfast.

For further information contact Tom Woolley or Siobhan Doolan at Green Building Digest, Department of Architecture, Queen's University Belfast, BT9 5BY.

Sustainable Homes

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