

HHP Master Class – The practicalities of delivering zero carbon homes



Background

With politicians fighting over the green agenda, long-term insecurity of fuel supply & prices, and daily reminders of climate change, it seems ever more apparent that we need to find new solutions to the way we live and the homes we occupy. At conception **Hockerton Housing Project (HHP)** was considered to be pioneering but marginal - today it is being recognised as offering serious solutions to a growing problem. Yvette Cooper, Housing Minister, visited HHP back in March 2007 to discuss our experience of zero carbon housing to help government make better informed decisions sadly it has taken a long time for government to act.

All new homes should have reduced CO₂ by [27% by 15th June 2022](#) and the “[Future Homes and Buildings Standard in 2025 will mean all future homes are net zero ready and will not need retrofitting.](#)” This is challenging designers and developers to consider more innovative solutions to reduce environmental impact.

HHP is an innovative residential sustainable development in the village of Hockerton near Southwell, Nottinghamshire. The architects were Professor Brenda Vale and Dr Robert Vale, whose own ground-breaking home in Southwell provided much of the inspiration and know-how for this project. We completed in September 1998 after three years of planning and 18 months of construction.

Our houses have been designed as a zero-carbon residential development and were among the first in the UK. They reduce life cycle energy to a minimum and are still amongst the most energy efficient, purpose-built dwellings in Europe. Maximum use of benign, organic and recycled materials has been made in the construction and the development is designed to be, to a large extent, self-sufficient or autonomous in nature. The houses are earth covered and have passive solar heating without a dedicated space heating system. Wind turbines and photovoltaics provide all of the energy required to run the homes and a community building operates as an energy island. The water and sewage systems are self-contained. We have had electric cars since 1995 but the energy for these is not produced on site – we plan to put this right! HHP has continued to be at the cutting edge; designing and building further developments.

Since completion Hockerton Housing Project has established itself as an exemplar of sustainable development locally and nationally, providing a unique 'real-life' experience of living sustainably. This has resulted in the development of a range of services through the creation of a small on-site business. These include: Guided tours, Workshops, Consultancy services, School education visits, Talks, Publication of sustainable guides, Venue for meetings & workshops. In December 2006, the Hockerton Housing Project won a National Energy Efficiency Award for the residential construction category.

To find out more about the Hockerton Housing Project, please visit our website at www.hockertonhousingproject.org.uk

Why you should attend

This event will be of particular interest to developers, self-builders, landowners, planners, architects, buildings services engineers, and other building professionals.

Delegates will gain:

- An overview of government targets for zero carbon homes and standards to meet.
- An understanding of the impact of these targets for future development and what are the key principals for delivery of zero carbon homes.
- Insight of the practicalities of achieving zero carbon housing.
- An understanding of strategies and technologies that can be deployed.
- Knowledge of diverse solutions for delivering a zero carbon or autonomous development including renewable energy technologies, and water systems (collection and waste), and how they can be incorporated into buildings.
- An insight into what it is really like to live in zero carbon homes and to live sustainably.

Programme

09.30	Registration and refreshments
10.00	Introduction: Objectives for the day and personal introductions
10.30	The new era of zero carbon development (<i>Where we are heading and the implications for buildings.</i>) Simon Tilley, HHP
11.30	The practicalities of achieving zero carbon development (<i>Focus on construction, energy and water</i>) Peter Yates and Simon Tilley, HHP
12.30	Organic lunch (<i>local caterer</i>) & networking
13.15	Tour of Hockerton Housing Project (<i>Including looking inside one of HHP zero carbon homes and the outside of three other local solutions to zero carbon housing</i>) Peter Yates & Simon Tilley
15.15	Refreshment break
15.30	Barriers and realistic solutions to zero carbon development Debbie Yates & Simon Tilley, HHP
16.15	Questions and answer session
16.30	Close

Unlimited tea and coffee throughout the day. This programme is only a guide with approximate timings. HHP reserves the right to vary the programme

Attendance at this event is limited to 15 delegates, to ensure a truly interactive and worthwhile event for all participants

CPD

Attending a HHP event can contribute towards your CPD requirement. This event can count towards 6.0 hours of CPD (this excludes time for lunch)

You may wish to discuss with your professional body – many other visitors have used visits to HHP to meet their CPD requirements, including RIBA & CIOB members.

Venue: Sustainable Resource Centre (SRC)

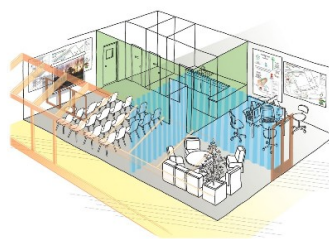
To meet the growing need from visitors, a learning resource centre was completed on-site in 2004, the **Sustainable Resource Centre (SRC)**.

The facilities include a:

- A dedicated audio-visual room
- Seminar facilities
- Permanent exhibitions.

The building itself has been built to similar high environmental standards as the homes, including meeting autonomous, zero heating and zero CO₂ standards.

“The SRC will be an inspirational centre and act as regional catalyst for sustainable action, offering improved facilities and more extensive activities for a wide range of interest groups.”



Terms and Conditions

Cost

- | | |
|---|--------|
| • Students | = £55 |
| • Individuals, and micro enterprises (up to 5 FTEs) | = £100 |
| • Organisations < 50 FTEs | = £150 |
| • Organisations 50+ FTEs | = £200 |

Booking

Your booking will be confirmed once payment has been received. Bookings must be accompanied by a payment to 'HHP Trading Ltd' Account No: 50025983 Sort Code: 08-90-74. Alternatively we can confirm bookings on issue of an invoice. Please email contact@hockertonhousingproject.org.uk to arrange this. Directions and further practical details will be sent to you with your booking confirmation.

Events may be cancelled by HHP with 5 days' notice whereupon guests will receive a full refund or offered an alternative date.

Cancellations

Any booking fee paid will not be refunded unless written confirmation is received at least five working days prior to the event, substitute delegates are welcome.

HHP reserves the right to vary the programme and cancel the event in case of insufficient bookings.

Testimonials

It is very useful to be able to talk about sustainability issues / techniques and then actually see (some of) them demonstrated in action. Much more effective than traditional classroom environment. I think the relative informality of the day is entirely appropriate and wasn't aware of the programme slipping to any great degree... or not getting a chance to see and discuss any particular aspect.... I think your enthusiasm for the project ensures that the discussions are thorough and well informed. ([Simon Hallion, Architect and guest lecturer Nottingham Trent University,](#))

I know that my colleague and I found the visit enormously useful and it has really helped me reach some solid conclusions on the most appropriate response to the challenge of constructing truly sustainable homes. I have already been preaching the virtues of your approach to our elected Members and partner housing associations and expect you will get a few more visitors as a result. ([Alan Wyld, Housing Enabling Manager, Swindon Borough Council,](#))

The day at HHP was very enjoyable and I think we all felt very welcomed and relaxed there. The most apparent thing to me was the collective wealth of knowledge and information you all have about sustainable living and the building processes involved. The practicalities of not only building an eco-home but continuing to live this lifestyle was discussed very openly and honestly, which I found very refreshing as you were not afraid to say when something didn't work for you even if it was supposed to be economically or environmentally sound. ([Helen Carter, Ecology Building Society,](#))

(From other HHP Master Classes)

I had a thoroughly enjoyable day at Hockerton and felt I learned a lot in what I thought was a wonderful model for ecological and sustainable living. I was very impressed with everything I saw, from the simplicity of the construction of the homes, and the amount of light projected through the conservatory area to the back of the homes, to the use of the solar and wind powered technology used for the energy supply for the homes, and the water supply and 'waste' management system. Compared with other conferences, seminars and visits I have undertaken in the course of my studies for my qualification, it has been the most enjoyable, interesting and informative, so on that basis I must say it has been the best value for money, as in the past I have paid more for less. ([David Spooner, Registration Executive, Lytham Land Registry](#))

I found it all very useful and the day was managed with pride, confidence and professionalism - I think its great what you guys have done I would like to visit again. Really really impressed. ([Senior Environmental Scientist, Wardell Armstrong LLP](#))

My main reason for visiting was that it's easy for us industrialists and academics to sit behind our desks pontificating on low-energy housing, but to visit the people who have actually DONE it is invariably refreshing, and is always a good thing to do as a 'professional sanity check'. ([Dr Neil Cutland, Executive Director, Inbuilt Ltd](#))

You made an excellent presentation and the level of technical knowledge was very high even when compared to similar project presentations that I have visited in the UK. I would thoroughly recommend the Masterclass to anyone wishing to know more about this field. ([Jon Morris, Principal, One Engineer](#))

The ability to see, hear & feel the products/engineering in action in a practical environment rather than just reading company brochures, watching promotional footage or demonstrations. It was very nice to talk to "real" people that live with the technology and have experienced benefits and pit-falls associated with it. ([Mark Cox, Building Surveyor, National Trust](#))

I think the main advantage of the day was being able to see the various technologies (that we've all been talking about for yonks!) actually functioning alongside each other, integrated into a real living community environment. You read about it, you hear about it but seeing it is altogether different. Terrific! ([Graham Mills, East Midlands Renewable Energies Group](#))

I thoroughly enjoyed the day and it was very encouraging talking to people who had practical experience rather than just a grasp of the theory. Simon's presentation on the principles was as clear as any I've seen, if not clearer and I particularly enjoyed his graphs showing the threshold between heating costs and insulation levels representing the point that thermal mass became important. the detailed discussion about construction and procurement challenges from Nick gave a practical edge to the day that you rarely get at other events. ([Rob Annable, Architect, Axis Design Collective, Birmingham](#))

"In brief your project at Hockerton is outstanding, the people amazing and the course was for me was thought provoking, eye opening and very inspirational." ([Martin Johnson, Brewster Bye Architects Ltd,](#))

"I had a great day at Hockerton and have brought away many valuable ideas about how Willmott Dixon Housing can deliver more sustainable developments." ([Gareth Rondell, Sustainability Manager, Willmott Dixon Housing Ltd](#))

Presenters/Guides/ Facilitators

General

- HHP have run many workshops in the past and are restarting the offering post Covid. We run workshops aimed at designers, developers (Self Bild and Commercial) and decision makers who are considering meeting the low carbon building challenge.

We have lived, breathed, demonstrated zero carbon living at Hockerton Housing Project + guided thousands of people per year, pre Covid, since 1995.

Peter Yates

Peter Yates a builder of the project, has a unique experience and knowledge of energy efficient housing.

Peter is one of the most experienced practical eco-builders in the UK being onsite in the construction of new build properties from Passivhaus all the way up to the Hockerton Standard House since 1995.

Simon Tilley

Simon Tilley (M Eng, C Eng, M I Mech E) Simon joined the project in 1995, after a background in Mechanical Engineering. This included spending two years in working for Voluntary Service Overseas (VSO) in Namibia.

Simon is closely involved in the design and development of local zero carbon housing schemes including the nine-house development in Eakring. He manages the HHP water & energy systems and is the manager of operations for Sustainable Hockerton Ltd as well as a number of key HHP projects, including onsite renewable installations. He also leads and facilitates HHP's developments with educational work including running workshops tours and training events. Simon was a Lecturer for the "Innovations in Energy" module at Nottingham Trent University and now mentors PhD students in the field.

Simon acts as one of HHP's most experienced technical members for consultancy, tours and workshops.