



The Barratt Green House

The first Code for Sustainable Homes
Level 6 house built by a major homebuilder



Welcome to the Barratt Green House



Mark Clare
CEO Barratt Developments

The Barratt Green House is a three/four bedroom family home designed to provide a solution to the needs of low energy, high density volume housing of the future.

As one of the lowest emission houses currently being constructed in this country, it combines outstanding design, the highest standards of energy efficiency and the use of innovative microgeneration.

Barratt is committed to innovation and continuous product development, coupled with the highest standard of design, construction quality and customer service. We bring the same values to the construction and development of the Barratt Green House and are confident it will make an important contribution to house building in the UK in the run up to 2016.

Building this home has provided us with invaluable insights into how zero carbon homes can be constructed and is giving us the opportunity to evaluate specific materials and technologies for future developments. The ultimate aim of this project is to learn how to design and construct a truly sustainable building that can be rolled out as a real home for the future – we plan to take the most successful aspects of the Barratt Green House design and apply them to homes we build in future.

The challenge now is to ensure that zero carbon is genuinely affordable and not just available to those who can afford it. I believe the Barratt Green House is one step towards realising that goal.



Rt. Hon. Caroline Flint MP
Housing Minister

Climate change is one of the most serious global issues we face. This government is determined to show real leadership, putting the UK at the forefront of world efforts to tackle it. But change begins at home. Housing is one of the major sources of the UK's carbon emissions. So it's vital that we start to design and build in more sustainable ways.

This is particularly important because of the significant numbers of houses we have to build over the next few years. With an aging, growing population and more people living alone, demand for housing far outstrips supply. The only way to resolve this is to build more houses.

Our goal is to build not just more homes, but better homes. That's why all new homes must be zero carbon from 2016, with progressively tough standards being introduced over the coming years. This is the most ambitious programme anywhere in the world. And the UK housebuilding industry is at the forefront - not only signing up to the target but coming up with the innovation that will make this happen.

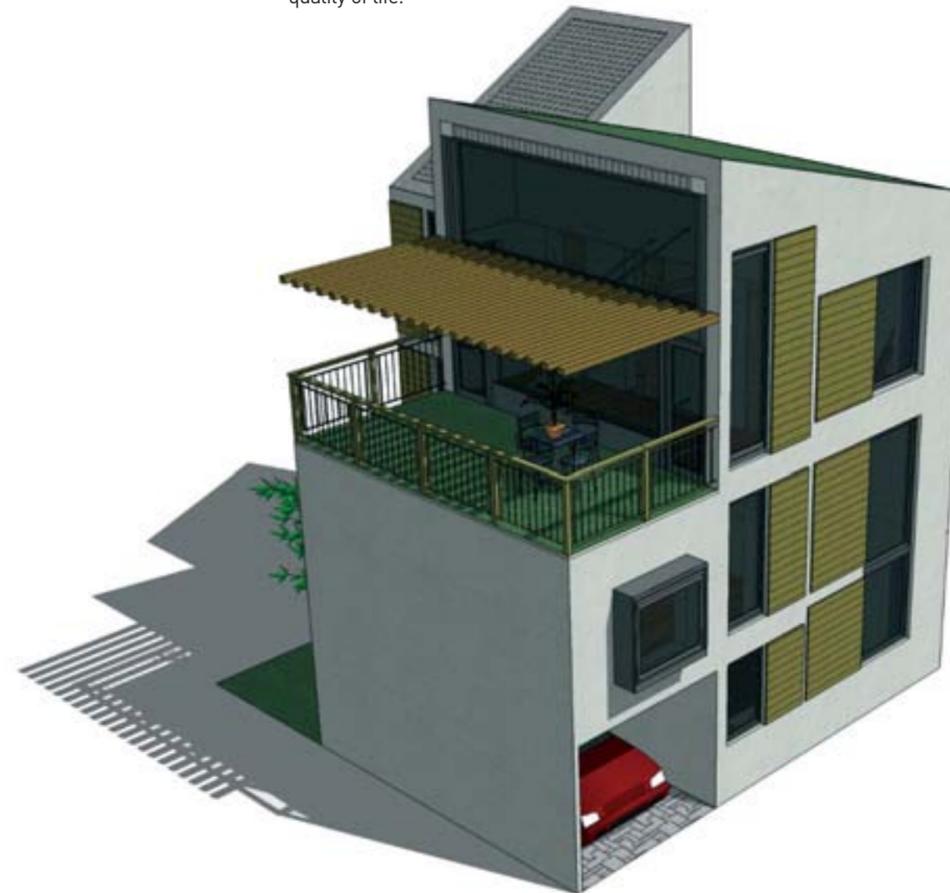
That's why I am delighted to see what Barratt have achieved with this project – one of the first low carbon projects in the country. Not only does this house showcase what is already technologically possible, it shows that greener living doesn't have to mean expensive design. I hope other builders continue to follow their example, and I look forward to a continuing strong partnership as we work together towards 2016.

Home for the Future

The Barratt Green House, designed by architects Gaunt Francis, won the national architectural 'Home for the Future' design competition, attracting more than 22,000 votes from the public.

The competition challenged architects and developers to produce a mainstream house type with reduced carbon emissions as part of the 2007 Mail on Sunday British Homes Awards, sponsored by the National House Building Council.

The award-winning Gaunt Francis design was selected ahead of eight other designs short-listed by a distinguished panel of judges and is supported by the National Centre for Excellence in Housing and the BRE (Building Research Establishment). It includes a blend of modern technology and tried and tested design principles to resolve some of the issues of modern living in a more sustainable fashion, without compromising quality of life.



"The Barratt Green House is a clear demonstration of research and development towards zero carbon housing and as such provides an exemplar."

Rt. Hon. Nick Raynsford MP
Chairman, National Centre for Excellence in Housing

The design is highly flexible to allow occupiers to make the home their own, while ensuring good quality space within the compact site plan requirements of the competition brief.

Following development with Barratt, the design meets the highest Level 6 of the Government's Code for Sustainable Homes and will therefore emit no carbon on average over the course of a year. It is the first home by a mainstream housebuilder which is so environmentally friendly it would meet the criteria for zero stamp duty.

The Barratt Green House is located at the BRE 'Innovation Park' at Garston, near Watford and will be the subject of rigorous scientific testing over a two-year period to assess every aspect of the design, construction and materials.

The Barratt Green House forms an integral part of the research programme which the Government has asked the National Centre for Excellence in Housing to co-ordinate, to help the house building industry achieve zero carbon in all new starts by 2016.

The Barratt Green House



Inspiration for the house design has been drawn from contemporary and historical housing in the UK and continental Europe, resulting in a home suitable for higher density urban or suburban living.

The Barratt Green House is a home that looks to the future. For example the heavy concrete floors used will reduce the need for cooling in the hotter summers anticipated in climate change predictions. Also, the interior space is flexible, allowing different permutations of layout to suit the changing needs of the occupiers.

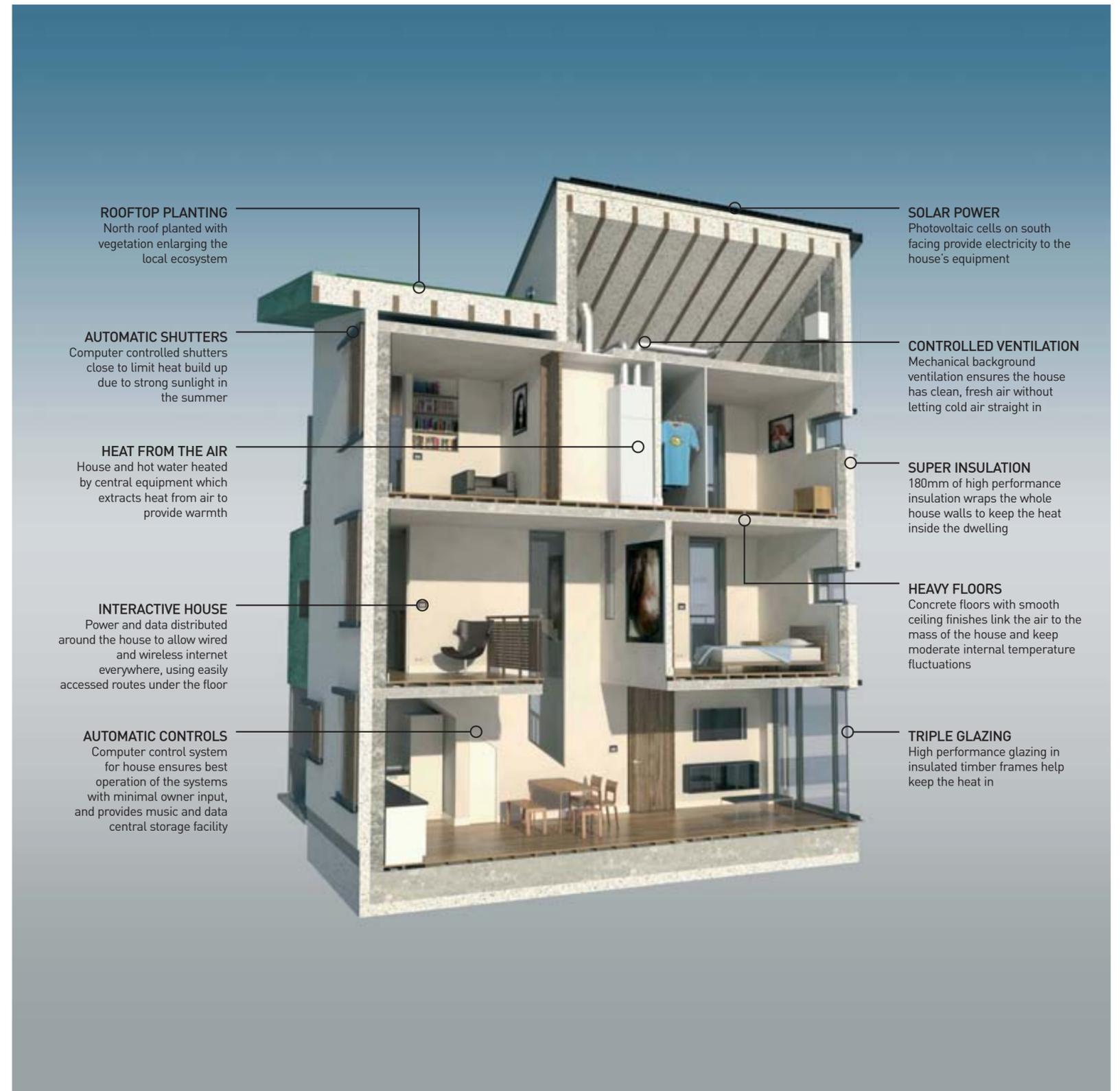
High levels of insulation are incorporated in the building's 'envelope', which provides Barratt with a sample of how to achieve Level 6 of the Government's Code for Sustainable Homes. The house walls are wrapped in 180mm of insulation to keep heat in, and the windows are triple-glazed, allowing a good proportion of glazing equivalent to 25 per cent of floor area. The result is a light and airy home offering a comfortable living environment.

"A hugely experienced team has been working to ensure the project meets zero carbon targets while remaining as close as possible to the award-winning design, to produce a prototype that is best able to meet the demands of volume building in the future."

Anna Scothern,
Director, National Centre for Excellence in Housing



Work begins on the flat foundation, known as a raft, rather than trenches dug deep into the ground at the edges



ROOFTOP PLANTING
North roof planted with vegetation enlarging the local ecosystem

AUTOMATIC SHUTTERS
Computer controlled shutters close to limit heat build up due to strong sunlight in the summer

HEAT FROM THE AIR
House and hot water heated by central equipment which extracts heat from air to provide warmth

INTERACTIVE HOUSE
Power and data distributed around the house to allow wired and wireless internet everywhere, using easily accessed routes under the floor

AUTOMATIC CONTROLS
Computer control system for house ensures best operation of the systems with minimal owner input, and provides music and data central storage facility

SOLAR POWER
Photovoltaic cells on south facing provide electricity to the house's equipment

CONTROLLED VENTILATION
Mechanical background ventilation ensures the house has clean, fresh air without letting cold air straight in

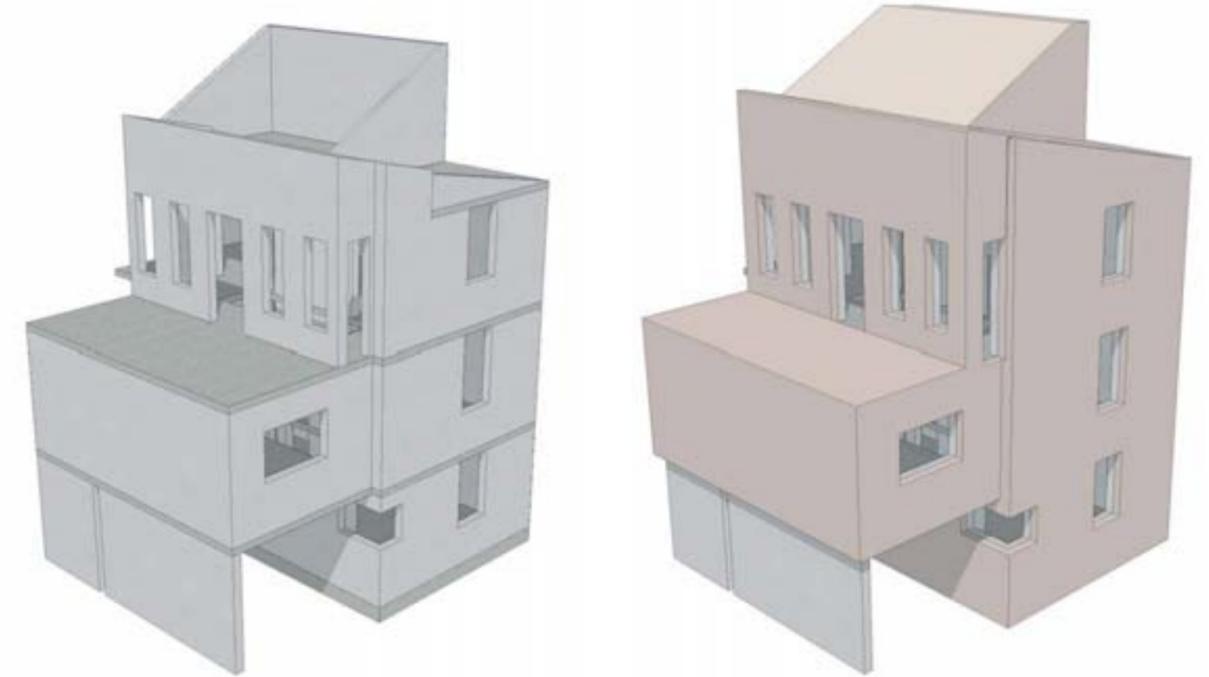
SUPER INSULATION
180mm of high performance insulation wraps the whole house walls to keep the heat inside the dwelling

HEAVY FLOORS
Concrete floors with smooth ceiling finishes link the air to the mass of the house and keep moderate internal temperature fluctuations

TRIPLE GLAZING
High performance glazing in insulated timber frames help keep the heat in



Handling aircrete wall panels



The structure of the house includes walls constructed from aircrete masonry blocks with thin-joint mortar and concrete floor slabs, to provide a robust frame with high 'thermal mass'. This will help reduce any potential overheating problems within the finished house.

The house is intended to achieve air tightness levels some ten times in excess of current Building Regulations. To ensure that the interior has plenty of fresh air, a special ventilation system with heat recovery replaces the more traditional 'trickle vents' seen in recently built homes. Incoming air from the outside is passed through a heat exchanger and warmed by heat captured from outgoing air being extracted from the building then circulated to the rooms.

In terms of energy supply, the Barratt Green House is designed to be built as part of a cluster of homes connected to a district electricity generating/heating system.

In addition to its energy saving features, the Barratt Green House picks up credits across the range of sustainability criteria. To minimise water consumption, for example, a rainwater collection and re-use system will supply water for WCs and the washing machine.



A floor section is positioned

Construction in pictures



Before work started



Oak flooring being laid



Wall panels are spray plastered



High performance triple glazed units



Roof-mounted solar PhotoVoltaic panels



Solar panel for hot water



Testing for airtightness

Living in the Barratt Green House

So what will living in the Barratt Green House be like? The answer is not vastly different from a 'normal' home. In many ways it will be more comfortable thanks to its advanced design and state-of-the-art computer-controlled features.

The three-storey, three-bedroom family home has a living-dining-kitchen space, a downstairs cloakroom, a games/play room, a home office, a family bathroom and an en suite to the main bedroom. All rooms are practically sized and serviced from a central hallway, which starts from the front door and covered car port area and terminates at the second floor roof terrace.

The materials used in the structure and high-performance insulation will help keep the house warm in winter and cool in summer. The home's automatic window shutters play a key role here, opening to make the most of daylight or closing to minimise heat build-up from strong sunlight. Special background ventilation ensures the house has fresh air without letting cold air in.



Living in the Barratt Green House – Interior Design

By Christine May

Christine May Interiors

We decided to approach the design of the Barratt Green House from the point of view of the ordinary person who has yet to be convinced that being 'green' doesn't involve sacrificing too many creature comforts.

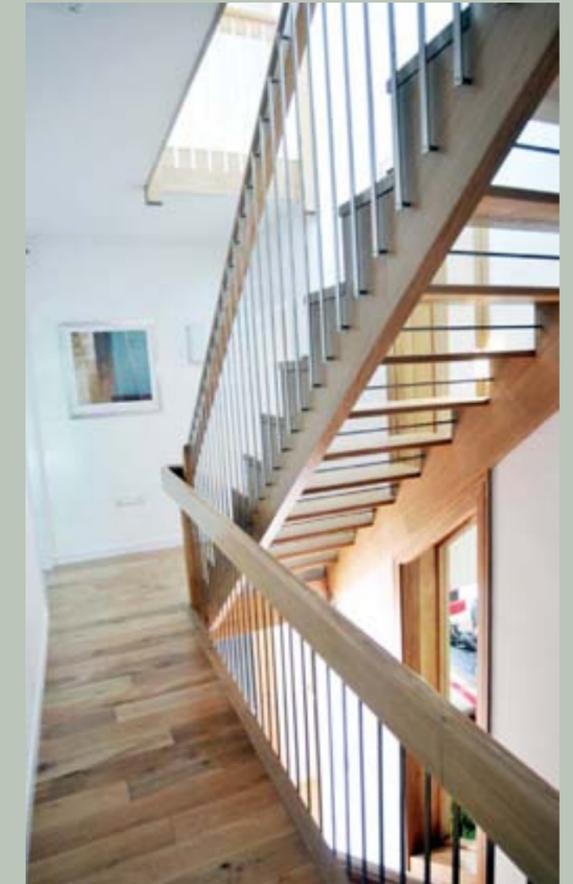
We wanted to show that it is possible to have a stylish and comfortable home without being an inventive DIY-er, that with a little thought it is possible to buy responsibly from the high street.

We have used low emission paint throughout. Wallpapers are non-vinyl and where possible natural inks have been used.

We have chosen natural fabrics throughout, such as cotton, linen, wool and silk. Mattresses are fabricated from natural latex, horsehair and organic cotton and wool. Towels use a mix of organic cotton and bamboo – a relatively new use of a sustainable material.

The bedroom carpets are 100 per cent wool with jute and cotton backing, the underlay is made from recycled industrial felt.

Upholstered furniture makes use of natural latex instead of foam or man-made materials. All wood used in the manufacture of the furniture is FSC certified and its custody chain is recorded.

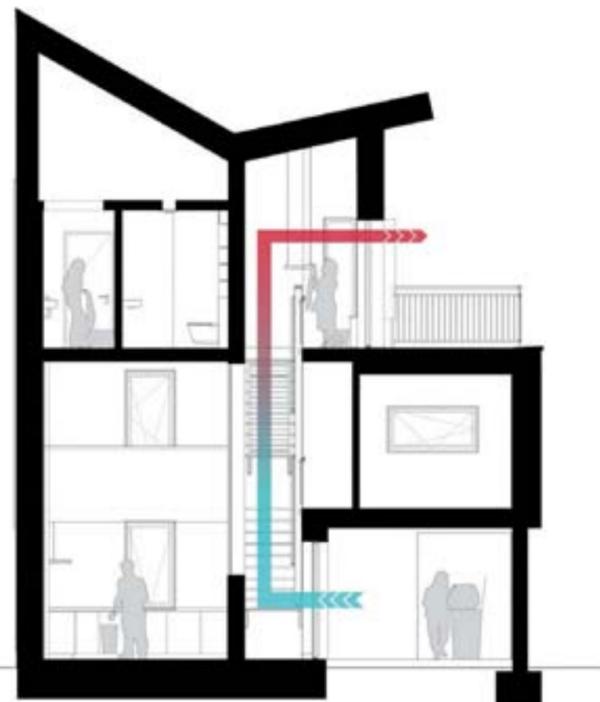


Formaldehyde free MDF has been used where possible and feature doors and trims have been made from recycled plastics: yogurt pots and milk bottles for media unit doors and mobile phones for the work surface on the media unit in the play room.

We have also endeavoured to use some recycled furniture. The chair in the living room for instance has been given a new lease of life with fresh upholstery. In the home office, we have used a second hand desk and chair, both refurbished to a high standard – not everyone enjoys the 'shabby chic' look.

Extensive use has been made of recycled glass, from the chandelier over the dining table to vases in the master bedroom. We've also included some fun items such as vinyl records recycled as bowls, and storage boxes made from recycled juice cartons.

www.christinemayinteriors.co.uk



An Air Source Heat Pump converts the energy of air from indoors or outdoors into heat, supplying the internal needs of the house. And you won't need a tumble drier – clothes drying is achieved at the head of the stairs using warm air rising through the house.

A wireless computer network will provide broadband access, together with individual choices of music and TV in every room and central data storage.

The home's flexible design can be adapted through its life to suit changing family needs or provide alternative uses such as B&B or student rooms.

We believe occupiers will not only enjoy living in the Barratt Green House but will also be proud of their home's contribution to a more sustainable future.

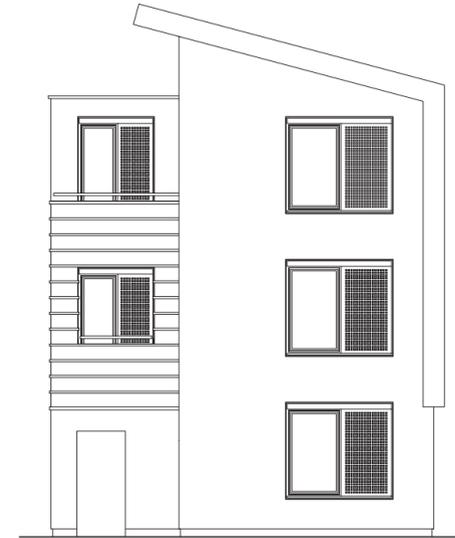
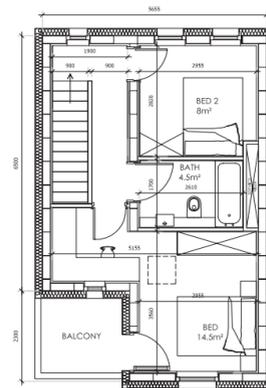
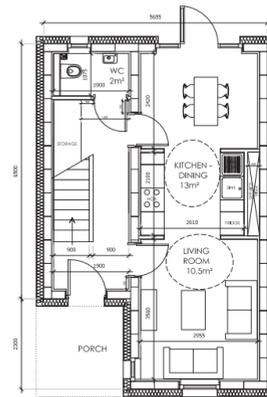
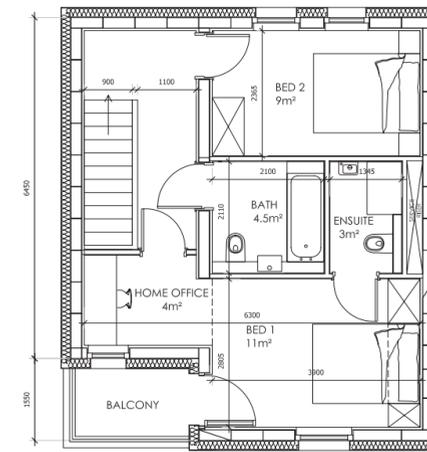
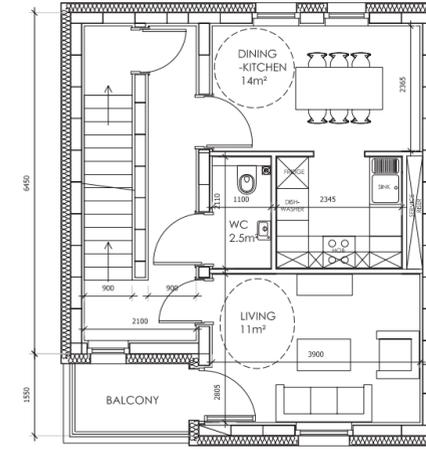
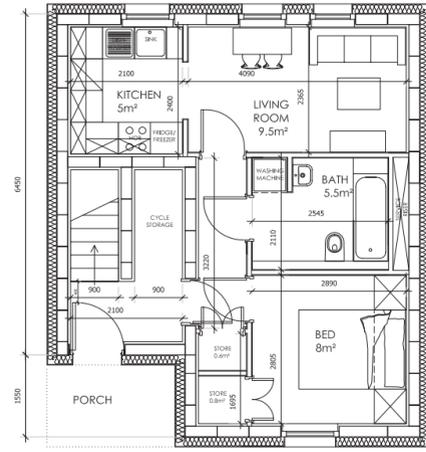
Learning lessons from the Barratt Green House

“The most exciting aspect of the Barratt Green House is that it’s not designed as a one-off: we will take what works and apply it to housebuilding across the country.”
 Mark Clare
 CEO, Barratt Developments PLC

Barratt plans to take the most successful aspects of the Green House design and apply them to homes that we build in future. Early findings from the test house construction include:

- The basic H&H Celcon block wall structure is comparatively simple to erect and provides an opportunity for improved air permeability values and reduced build times, which means the system is capable of being used on future developments. It would also use offsite fabrication, allowing MMC compliance when required.
- The Structurally Insulated Panels (SIP) roof would also reduce construction programme times and provide another offsite fabrication element to this system build. Roofs could be assembled at ground level and lifted as a complete item.
- The solid external wall block system used on the Barratt Green House could be used at multiple levels of Code compliance. A simple reduction in external insulation thickness, leaving the basic structure as standard, would increase production volumes and hopefully reduce costs.
- Improvements to the performance of insulation materials could reduce wall thicknesses and therefore increase land-take.
- Windows with low ‘U’ values will need to be sourced within the UK from manufacturers capable of delivering the volumes needed for Code compliance.
- The solid external wall block system is capable of supporting a variety of finishes such as render, brickwork slips and boarding, to produce interesting and diverse streetscapes which should assist with planning authority discussions.
- Sustainable timber sourcing must be a requisite of procurement and suppliers must be accredited to avoid drawn out administration exercises.

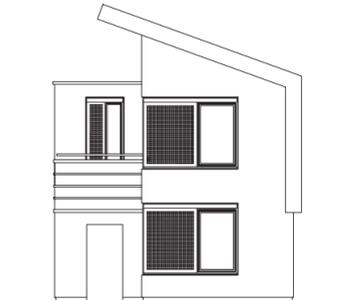
- Cost-effective and low-maintenance rainwater harvesting systems must be sourced to avoid future customer care issues.
- All white goods must have low energy and water use requirements.
- Improved appliances would provide better water flow rates, for example in showers, increasing customer satisfaction.



Draft house type G-Pad + 2 bed



Draft house type 3.4



Draft house type 2.1

Working together to deliver solutions



Establishing successful partnerships with key suppliers has been a vital ingredient in delivering the Barratt Green House.



Smartroof roof panels

Smartroof Limited



Smartroof is a complete structural insulated roof panel system enabling a whole roof to be erected in under three hours and allow 100 per cent habitable space. Primarily developed for three-storey townhouses to maximise the available space, smartroof is gaining market share because of its exceptional range of U-Values, major Health and Safety benefits and most recently Robust Detail approval.

www.smartroof.co.uk



H+H aircrete panel being installed

H+H UK Limited



H+H UK were involved at an early stage in providing the basic design and the elements for the walling. Lightly reinforced storey height aircrete panels were used in the construction, installed by one of H+H's recommended contractors (Minett Group). The panels provided a quick, thermally efficient, airtight shell, with a loadbearing capacity sufficient to support the concrete floors.

www.hhcelcon.co.uk

The Concrete Centre



The Concrete Centre is the central development organisation for the sector in the UK. Its aim is to enable the design team, including clients, architects and housebuilders, to realise the potential of concrete, through its provision of information services. These services, which include specific project advice and best practice guidance establish The Concrete Centre as a true centre of excellence for concrete.

www.concretecentre.com

Symphony

Symphony

Symphony is the UK's largest privately owned supplier of fitted kitchen, bedroom and bathroom furniture, working with many of the UK's leading housebuilders. The company offers an extensive collection of fitted kitchen furniture, from traditional to more cutting edge designs, coupled with a complete project management service.

www.symphony-group.co.uk

Kingspan Solar Limited



Kingspan Solar Ltd provides solar hot water packages, custom designed for each application. The challenge in the Barratt Green House was to design and install a solar thermal system, in conjunction with other equipment, to achieve a rating of Code level 6. The system was designed, in conjunction with Arup, by Coates Design Partnership and featured a Kingspan Solar system with flat panel collectors and Range Tribune HE Duplex solar cylinder.

<http://www.kingspansolar.com/>



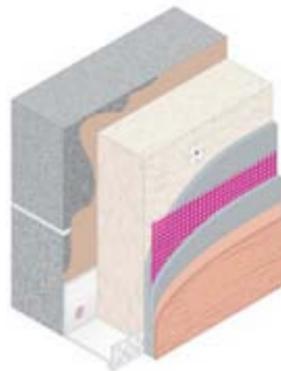
Range solar cylinder

Weber



Weber, manufacturer of insulated render systems, contributed to the Barratt Green House project with its weber.therm XM external wall insulation system. The BBA certified weber.therm XM meets the stringent U-value required and consists of a layered sequence of applied materials to the exterior structure. By insulating externally the system increases the energy efficiency of the building and provides a stable environment for the solid wall construction.

www.netweber.co.uk



Weber external wall insulation



Whirlpool



With 14,000 employees, a sales presence in over 30 European countries and manufacturing sites in seven countries, Whirlpool Europe is a wholly owned subsidiary of Whirlpool Corporation. The world's leading manufacturer and marketer of major home appliances, Whirlpool Corporation has annual sales of approximately \$19 billion, more than 73,000 employees, and 72 manufacturing and technology research centres around the world.

www.whirlpool.co.uk

Bauder Limited



This high-performance environmentally-friendly single ply system is a lightweight waterproofing option for the Bauder sedum blanket green roof. The recyclable waterproofing membrane with its environmentally friendly features and low embodied energy during production means that this system provides a sustainable solution. The sedum blanket that tops the Thermoplan T provides instant green coverage and is grown in the United Kingdom.

www.bauder.co.uk



Bauder sedum roof



Daikin heat pump

Daikin Airconditioning UK Ltd



The altherma system is an air source heat pump, which absorbs renewable energy from the outside air for use in domestic heating and hot water. Through its inverter control the altherma is able to modulate the heating capacity of the system to accurately match the heating requirement. This is one of the key technologies employed to help achieve the Code level 6 rating.

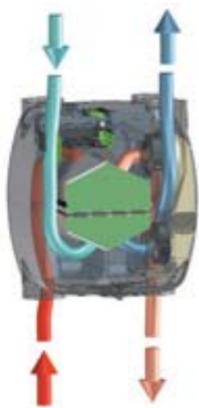
www.altherma.co.uk

Vortice Limited



Vortice Limited, European market leaders, have been supplying Barratt with ventilation solutions for 12 years. The company are at the forefront of new technology and are proud to have provided the energy efficient Heat Recovery Unit to the Barratt Green House. Enabling lower heating requirements, it offers constant fresh air supply to benefit the occupants' health and building fabric.

www.vortice.ltd.uk



Vortice heat recovery unit



Armour touchpads

Armour Home Electronics



Armour Home Electronics is the leading manufacturer and supplier of integrated multi-room audio and video products in the UK. Our customers install easy to choose options in the new build and renovation market.

The Barratt Green House has Systemline Modular fitted throughout which distributes audio and video to each room. A Colour touch screen gives easy control of iPod, radio, DVD as well as lighting and heating control.

www.armourhome.co.uk

Alltek Spray



Alltek's concept of Polymer Bound Thin Coat Spray Plaster combines speed and quality with outstanding long term performance, providing a superior finish in shorter working time and at reduced costs. The Alltek coating and application technique is well proven and has been an outstanding success for over 50 years. Alltek is a non-toxic green product based on fine milled white marble and delivered ready for use.

www.alltekuk.com



Alltek spray plaster

The first step – the Barratt EcoSmart show village

The Barratt Green House builds on some of the technologies pioneered at the Barratt EcoSmart show village in Chorley, Lancashire, an award-winning 'eco-village' of new homes packed with the latest in energy-efficient and 'green' technologies.

The eco-village was the first project of its kind by a major UK housebuilder, and comprised seven family houses using various combinations of wind, solar and geothermal power as well as micro combined heat and power (CHP) units.

The village was unveiled in May 2006 and remained open for 15 months as an experiment into how effectively 'green' technologies can be incorporated into new homes.



"The Barratt EcoSmart Show Village has been invaluable to provide us with a wealth of performance data on various low carbon technologies."

Dr Tony Sung
Chairman of CIBSE Electrical Services Group
Lecturer, School of Mechanical, Aerospace and Civil Engineering
The University of Manchester

Academics from The University of Manchester monitored the performance of the renewable technologies and are now compiling a report which will provide vital information both to Government and the industry which will help meet zero carbon emissions standards for new build. Key preliminary findings include:

- Ground Source Heat Pump – would reduce CO₂ emissions by 62 per cent and would take around 15 years or less to pay for itself at today's electricity prices
- Solar PV roof panels – on average, an unobstructed PV system generated 850kWh of electricity a year
- Solar Hot Water Thermal Collectors – on average, a 2.5 sq m or higher SHW unit could heat a 180 litres tank of hot water on a cloudless day
- Micro-combined heat & power units – on average, the electricity to heat generation ratio of the mCHP units was around five per cent

The project won the Built Environment award in the Innovation in Engineering Awards.

More information can be viewed at
www.barrattdevelopments.co.uk/media/casestudies/EcoSmart.pdf



Micro-wind turbines and photovoltaic panels being tested at the EcoSmart show village

The next step – England's first zero carbon community



An artists impression of the Hanham Hall development, due to be completed in 2011



Listed building will be retained



How a Code for Sustainable Homes Level 6 unit at Hanham Hall will look and operate.

"We are meeting a dual goal – tackling climate change whilst improving housing quality. The winning bid by Barratt tipped the balance because they thought about eco-living, not just eco-buildings."

Steve Carr
Director of Policy and Economics, English Partnerships

Barratt is to build the first large-scale zero carbon community in the country.

The Group has been selected by English Partnerships, the Government's national regeneration agency, as the Preferred Developer for the former Hanham Hall Hospital site near Bristol.

Homes on the site will meet the Government's most exacting eco standard – Level 6 of the Code for Sustainable Homes – which will enable a family living there to reduce their entire carbon footprint by 60 per cent.

The homes on the 6.6 hectare site will be completed in 2011. At least a third will be affordable and there will be retail and employment space. An on-site biomass combined heat and power (CHP) plant will deliver energy to all homes and commercial premises.

As well as zero-carbon homes, this ground-breaking project will create eco lifestyles. It will hand over a listed building to community use, capture rainwater and include sustainable drainage, farmers' shops, a car club and bicycle storage.

Working alongside Barratt at Hanham Hall are HTA architects, ARUP, Kingspan Offsite and Sovereign Housing Group.

Hanham Hall was the first site identified under the Carbon Challenge, being run by English Partnerships as part of the Government's commitment to tackle climate change. The Challenge will deliver zero carbon homes and communities well in advance of this becoming mandatory in 2016, and help the housebuilding sector demonstrate that the targets are feasible and can be commercially viable.

Partnership to deliver low and zero carbon homes



St Andrew's Hospital in Bow, East London, is one of the sites at which Barratt and E.ON are working together to deliver low carbon energy solutions

Barratt and E.ON, one of the UK's leading power and gas companies, have teamed up to deliver low cost and reliable solutions to meet the Government's zero carbon homes agenda.

The alliance is the first of its kind in the UK and will draw on Barratt's expertise in energy-efficient homes and E.ON's world-wide experience in low-carbon energy technology and research and development facilities.

Working with E.ON we will explore the best technical solutions to meet planning requirements and provide the most cost-effective and reliable energy solutions to Barratt developments, ranging from combined heat and power plants to micro renewable technology for individual homes.

"This will play a key role in helping our customers to achieve their low carbon objectives and help the Government to meet its carbon reduction targets."

Graham Bartlett
Managing Director, E.ON Energy

The collaboration will provide Barratt with a competitive edge, as finding the best low carbon energy solutions is a vital part of future housing developments. It will also enable us to provide the lowest cost and most reliable ways of cutting emissions for homebuyers.

In the first instance it will focus on 12 developments, a number which will increase during the next two years to comprise several thousand homes across Great Britain. The sites are likely to include Hanham Hall, near Bristol (see pages 18/19), and St Andrew's, a former hospital in Bow, where 20 per cent of the energy used will be renewable.

E.ON is one of the UK's leading power and gas companies and also a leading green generator, with 21 wind farms and one of the largest dedicated biomass power stations. Combined, its renewable portfolio generates enough green energy to power the homes in a city the size of Manchester.



UK Green Building Council



"Barratt are at the forefront of bringing sustainable homes into the mainstream. The development of a zero carbon prototype home, eight years before the 2016 target, is just the sort of innovation required."

Paul King
Chief Executive of UK-GBC

Barratt is the only major housebuilder to have become a founder member of the UK Green Building Council (UK-GBC).

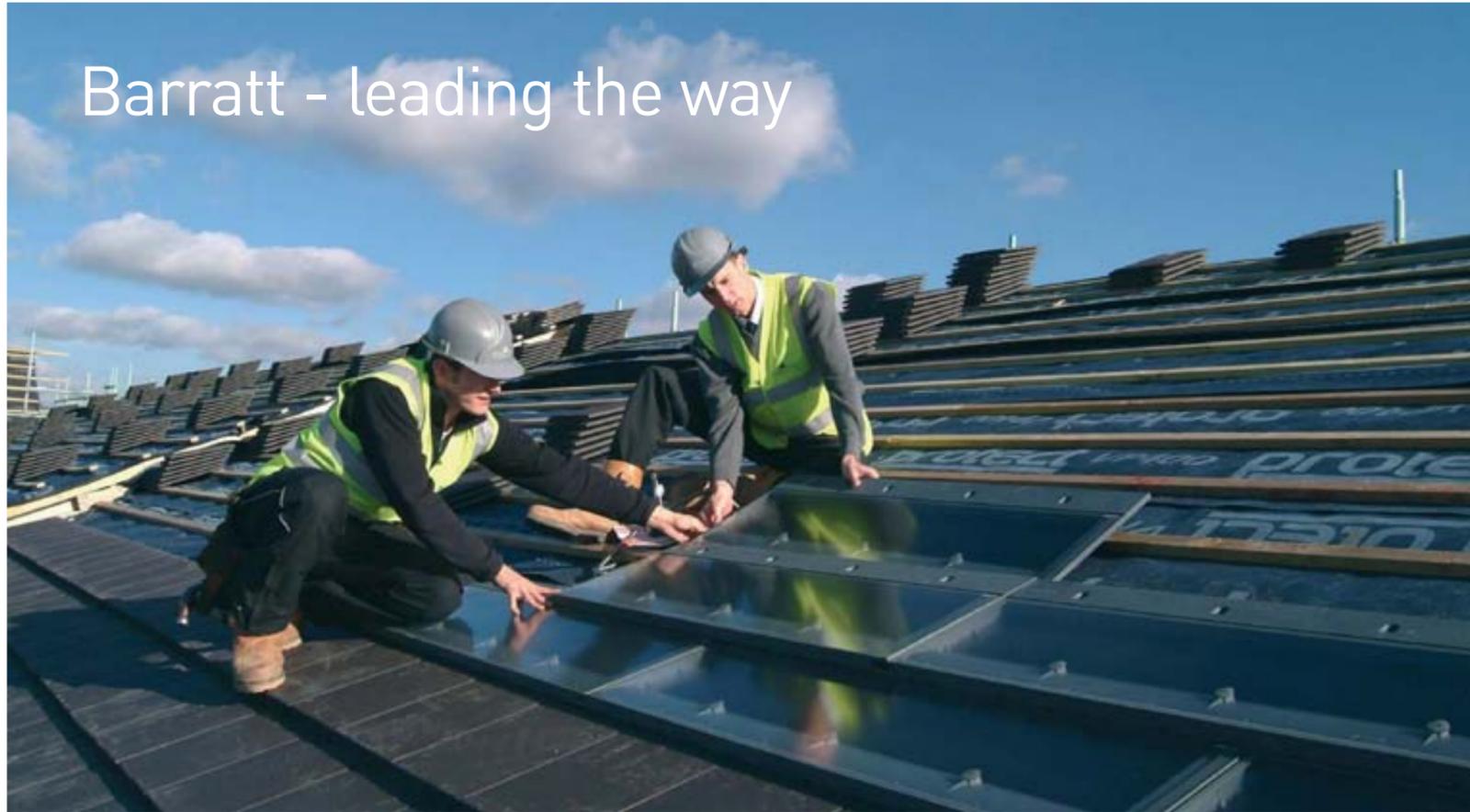
The UK-GBC is an industry led, independent, not-for-profit, membership based organisation whose mission is to dramatically improve the sustainability of the built environment by radically transforming the way it is planned, designed, constructed, maintained and operated. (www.ukgbc.org).

Mark Clare has been appointed Chair of the UK-GBC task group on zero carbon homes. The zero carbon task group is part of the UK-GBC's contribution to Government's 2016 Taskforce.

The group reported to Government on the definition of zero carbon, recommending a way to include off-site renewables within the definition. It comprised representatives from major housebuilders, engineers, developers and energy suppliers.

The group examined the options for meeting the energy needs of very efficient homes in the most effective way to achieve the target of zero carbon development by 2016, while optimizing the use of the UK's renewable energy resources locally and nationally. It gathered expert evidence and reported on the best way to accredit off-site renewables.

Barratt - leading the way



Upton solar roof panels (NU@D2)

The Government's Housing Green Paper in July 2007 represented a landmark for the industry: it put sustainability at the heart of housebuilding in the UK for the next decade and beyond.

Barratt fully supports the zero carbon agenda. We intend to make as substantial a contribution as we can, which is why we have worked on a succession of pioneering 'green' initiatives over the last two years.

We are committed to boosting the amount of new housing which is sustainable and has higher environmental standards. This will only be achieved by steps forward in house design and materials technology, a major stream of work for us and our partners.

We already have 100 developments which use renewable technologies and many more will follow in the coming years.



Aspect at Upton

Our Environmental Charter

Barratt supports the need for progressively higher standards in the built environment and is committed to delivering these as quickly and as cost effectively as possible. We will focus our efforts on reducing our own and our customers' environmental impact improving the environmental quality of what we build.

Managing our own environmental impacts

- 1 We will put in place a comprehensive measurement system based on ISO 14001 for our company's impact on the environment covering our offices, transport and sites. This will include energy, water and waste.
- 2 We will set ambitious targets to reduce our impact in each of these areas by 20% over the next 3 years. At the end of that time we will consider using offsets to set a carbon cost for the organisation as a further driver to reduce energy consumption.
- 3 We will procure all electricity used in our offices and sites from renewable sources.

Helping our customers to improve the environment

- 4 Barratt homes will be installed with A rated domestic appliances where they are available as part of a new home sale.
- 5 All of our new homes will be offered with a green tariff for electricity as standard, at no extra cost to the home buyer.
- 6 We will use our purchasing capability and start to offer new homeowners energy saving packages including energy meters, solar panels at cost price and increasingly as standard.

Improving the environmental standards of what we build

- 7 We are committed to resolving the issues that need to be tackled to achieve zero carbon homes by 2016. We will invest in building prototypes such as the Green House at the Building Research Establishment and major initiatives such as the Carbon Challenge development at Hanham Hall. We will work with our suppliers to provide technological solutions to deliver zero carbon affordably.
- 8 New planning applications promoted after 1st July 2008 will be to Code Level 3. We will have developed Code Level 4 compliant designs by 1st January 2010 and concluded the feasibility of Code Level 6 compliant designs by 2013 to facilitate meeting the 2016 zero carbon target.
- 9 We will enter into a partnership with an energy partner - Eon - to design, install and operate low carbon solutions for our major developments across Great Britain in the most cost effective way.

To underpin our commitment to this Charter we will bring together an advisory board comprising environmental partners to help guide and drive the company towards its environmental ambitions.



Award-winning Visage



David Wilson Homes, Chapelford



eScape at Eden village

Barratt Developments PLC is Britain's best-known homebuilder, with an approximate 12 per cent share of the UK market. The company has a network of homebuilding divisions strategically located throughout Britain trading under the Barratt Homes, David Wilson Homes and Ward Homes brands.

The Barratt Green House

www.barrattdevelopments.co.uk

Front cover, page 10 and 11 photography courtesy of Denis Jones, pages 4, 6, 7, 8 and 9 courtesy of Peter White, BRE.

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