ENERGY EFFICIENT HOMES

BARRATT
DEVELOPMENTS PLC

DID YOU KNOW?

29%

of all **UK energy** use is in the home. [1]

80%

of home energy is used to heat rooms and hot water. [2]

OUR NEW HOMES ARE MORE EFFICIENT AND SAVE CUSTOMERS MONEY

55%

Fuel bills are up to 55% lower than a Victorian design.

£1,312

Saved on average per year (based on a four bedroom semi-detached).

This is a win-win for our customers who save money on bills in times of rising energy prices.

OUR ROLE

In line with our Leading Construction and Customer First business priorities, and our principle of Safeguarding the Environment, we build efficient homes with low running costs, reducing the carbon footprint of our customers.

OUR APPROACH

FABRIC FIRST

Older homes are often 'fixed' to be made more energy efficient. But a well-designed new build home embeds energy efficiency from the very beginning without the need for expensive upgrades.

This 'fabric first' approach means building energy efficiency into a home from the outset - using great design, technology and materials. This is more efficient than 'plugging the gaps' through retrospective insulation or generating renewable energy to replace that lost through an inefficiency.

A combination of innovative design and enhanced services offer improved energy efficiency including:

- Thermally broken lintels, which improve insulation around windows and doors.
- Increased floor insulation.
- Waste water heat recovery systems which capture and re-use heat e.g. from your shower water.
- Energy efficient boilers and hot water cylinders where required.

LOW CARBON COMMUNITY AT HANHAM HALL

Lessons learnt about fabric first techniques have been used in the design of our Hanham Hall development near Bristol, the first site in response to the government's Carbon Challenge initiative. We are still learning from ongoing studies on actual energy use in the community since its completion in 2015.

*Data above from Barratt Developments PLC reporting period, 1st July 2015 to 30th June 2016 for all brands.

[1] Energy consumption in the UK, Dept. for Business Energy and Industrial Strategy (2016)

[2] ibid

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HOW WE DO IT[3]

External cavity walls contain a space for wall insulation. The latest, most efficient insulation is **six times** more efficient than 1960s materials. Could save £155 per year compared to an uninsulated cavity.

Double glazing filled with argon gas lets the sun in, but reduces heat loss. It is **twice** as efficient as mid-1990s double glazing. Could save £80-£110 per year compared to a single glazed house.

External doors tightly fitted and sealed prevent draughts.

Condensing boilers capture heat and energy which would be wasted by older boilers in exhaust gases.

Kitchen appliances are A* or A rated, the most efficient on the market.

Energy efficient lightbulbs such as LEDs[4], can save £35 per year compared to halogen bulbs in the home.

Demonstrations with customers and a Home User Guide ensure they know how to use their heating and electricity efficiently.

LOW CARBON SOLUTIONS

30%

of our homes are connected to a renewable energy source...

- **Combined heat and power** systems capture and use heat which would be lost from a system generating electricity alone.
- **Photovoltaic (PV) panels**, use sunlight to generate electricity.
- **Solar thermal panels** use sunlight to heat water.

PLANNING FOR THE FUTURE

CASE STUDY: SCOTSWOOD, NORTH EAST ENGLAND

Scotswood residents near Newcastle-upon-Tyne enjoy efficient appliances, smart energy meters to track their energy use, and well-insulated walls.

A combined heat and power energy centre reduces the carbon footprint of each home by a third. Hot water is always ready to use, and the energy centre management is responsible for its maintenance and repair.

[3] Costs in this section are from the Energy Savings Trust, and are approximate only, based on a semi-detached gas heated home with March 2016 fuel costs. www.energysavingstrust.org.uk

[4] Light emitting diodes