Research

The market for Sustainable Homes

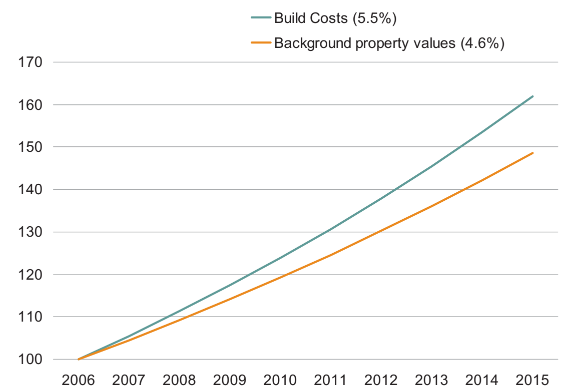
Summer 2007

"When it comes to energy efficiency, the average householder appears to be more motivated by saving money than saving the planet"

Yolande Barnes, Savills Research

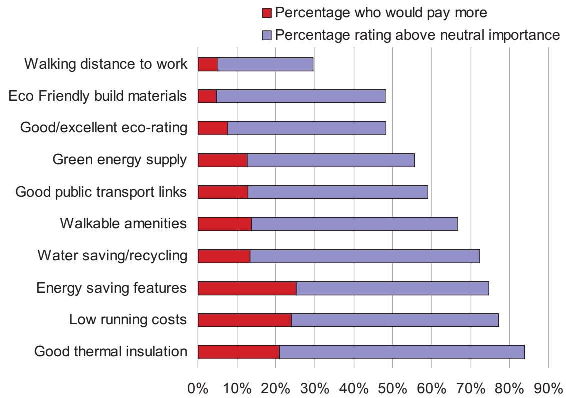
- Most UK households do consider 'green' issues to be important but few are prepared to pay more for measures that reduce environmental impact. The introduction of Environmental Performance Certificates as part of HIP's in August 2007 may change this.
- Younger families with children see environmental issues as more important than older households. We foresee that their importance will continue to rise amongst home buyers.
- The introduction of the Code for Sustainable Homes (CSH) could increase build costs from anywhere between £3,000 and £36,000 per dwelling depending on the CSH level being attained. All new housing to be zero-carbon (level 6) is planned for 2016.
- Stamp duty exemption is only applicable to new zero-carbon homes sold for the first time and is not available on subsequent sales. This will limit the premium available to developers to off-set additional build costs.
- The cap on stamp duty discount for zero-carbon new homes will significantly diminish the potential for higher build costs to be offset by increased value at the upper end of the market.
- The more imminent issue is how to bridge the cost/value gap of meeting the staged sustainability targets where stamp duty exemption has no impact.
- Environmentally-friendly features are more likely to directly increase marketability rather than values in the short term but they can be combined with design features that will add value for other reasons.

Build costs may rise more than house prices ...



Source: Savills Research

... but sustainability doesn't add much value



Source: Savills Research

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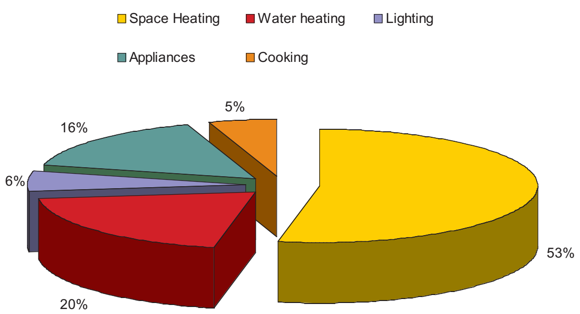
Regulation: background and impacts

Environmental concerns are having an impact on almost every area of world business. Real estate markets in the UK are no exception but, whilst the commercial property markets are looking at the prospect of changing occupier demand and the emergence of a two-tier investment market, there is little evidence of how the UK market for residential property will change.

The primary driver of change in the residential development market so far has been regulatory rather than market-driven. With environmental issues climbing fast up the political agenda and Kyoto and other targets to be met, it is hardly surprising that governments are looking for ways of reducing greenhouse gas emissions in every possible arena. The use of energy in homes accounted for 27% of the nation's CO_2 emissions in 2004 so, naturally, the domestic consumer is a target for action.

Whilst the obvious target for the reduction of existing emissions has to be retro-fitting carbon saving features for existing homeowners, those concerned with curbing emissions have the immediate issue of preventing any further increase. Each new household has the propensity to increase CO_2 emissions by a millionth of 1%. If current rates of new home building persist, it will take about 7 years to raise national CO_2 emissions by 1%. If the government's stated aim to increase housebuilding rates succeeds, then it will take just 20 years to raise CO_2 emissions by 5%. The energy efficiency of new stock therefore becomes a very important marginal driver, not in reducing the current rate of domestic emissions but in preventing them rising any higher. It is little surprise that so much regulatory activity has been concentrated in this area.

Components of CO_2 emissions in the home



Source: Savills Research

The chart above shows how energy usage in the home breaks down between different components. Some 21% of CO_2 emissions are out of the hands of developers as they relate to cooking and appliances which are largely the choice of the occupier and user. This leaves 79% accounted for by space and water heating and lighting - all of which will be substantially affected by the decisions and actions of the developer. The specification of heating and lighting equipment and the design of the home, its insulation standards, aspect and fenestration, for example, will have a major impact on its energy performance.

The UK house building industry has been affected in numerous ways by new regulations relating to energy efficiency and sustainability. These range from efforts to preserve rural land through restrictive land release policy, to the 'sustainable communities' planning policies, to ecohomes ratings and the Code for Sustainable Homes and Energy Performance Certificates, to technological solutions to make buildings more energy efficient by changes to Part L and other building regulations. All of this policy-driven change has had substantial cost impacts for developers. Scarcer land has pushed prices higher and quantity surveyors estimate that recent building regulations and other environmental measures will add to build costs, pushing inflation to 5.5% per annum. This is before taking into account the costs of future drives towards zero carbon homes. If house prices rise, as we predict, at a long-term average of 4.6% per annum, this means that build costs actually risk outstripping the increased value of housing. This, in itself, changes the risk profile of a house building industry which has been able to rely on market increases to cover cost overruns for at least the last ten years.

Recent announcements from the DCLG suggest that regulatory impacts will not stop here. Statements from ministers suggest that the Government is looking for UK housebuilding to set new European standards in energy efficiency. The Code for Sustainable Homes (CSH) is part of this housing policy initiative, and has the aim of achieving zero-carbon status for new housing by 2016. At present the code is not mandatory but the the Government is considering to make registration to the code compulsory for all new homes from April 2008. The code rates the sustainability of housing on a scale of one to six across 9 categories, with level 6 being zero-carbon. Meeting level 6 requires zero emissions from all energy uses in the home including appliances. Provision of renewable energy sources either on the property, on-site, or from an off-site accredited source forms part of the requirement in meeting level 6. The planned targets for the code is for level 3 of CSH to be met by all new housing by 2010, level 4 by 2013, with all new housing achieving level 6 (zero-carbon) by 2016.

The following table shows recent figures from DEFRA & BRE, giving the costs and benefits of providing various measures in the average home. According to these figures, the additional costs to a developer of

Research

	Average cost	Cost saved per year	Payback (years)	Carbon saved (kg per year)	Cost per kg C/yur
Micro combined heat and power unit	£1,571	£230	6.8	508	£3.09
Ground source wind pump	£4,725	£368	12.8	990	£4.77
Microwind turbine	£2,363	£224	10.5	263	£8.98
Solar water heating	£2,625	£48	54.7	88	£29.83
Photovolatic (PV) electricity	£9,844	£212	46.4	249	£39.53

Source: DEFRA, BRE.

achieving negative carbon emissions could be as little as £9,000 per home if a combination of micro wind turbines, heat pumps and micro Combined Heat and Power (CHP) units are used.

On the other hand, recent research by Cyril Sweet commissioned by English Partnerships and the Housing Corporation suggests that the costs of achieving carbon neutrality will be much higher. They show that the additional costs to the developer of achieving the equivalent of CSH level 5 (level 6 was not examined) could be between £26,000 to £36,000 per dwelling, with the greatest costs associated with the development of high rise flats. In terms of meeting the more short term targets of the Code, unsurprisingly, the costs are far lower. Reaching level 3, for example will cost between £3,000 and £6,000 per dwelling, increasing to £8,000 and £17,000 to meet level 4.

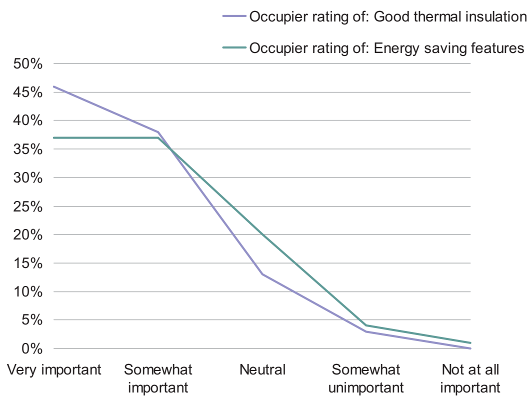
The research noted that there could be significant savings if a site wide approach, for example a district CHP unit, could be used. There would also be savings if wind turbines were to be used over photovoltaics. Both pieces of research show that different technologies cost different amounts per unit of carbon saved.

Occupier attitudes to sustainability

On the other side of the cost equation is the ability for environmentally sustainable features to add value to housing. This has been significantly under-researched in comparison to cost issues. This report attempts to redress the balance by looking at the issue from a market point of view. It draws heavily on occupier research which was carried out in the second half of 2006 by Savills Research department on a cross section of UK households and examines the possible impacts of eco features in the home.

Most UK households do consider eco issues to be important. A high proportion of respondents rated the importance of good thermal insulation and energy saving features, for example, very highly. Putting these pro-green sentiments into practice however, is a different story. Only 20% of those surveyed considered their own homes to be eco-friendly. Most were neutral, perhaps implying that they did not know. Action against global warming by households is also weak when it comes to car usage.

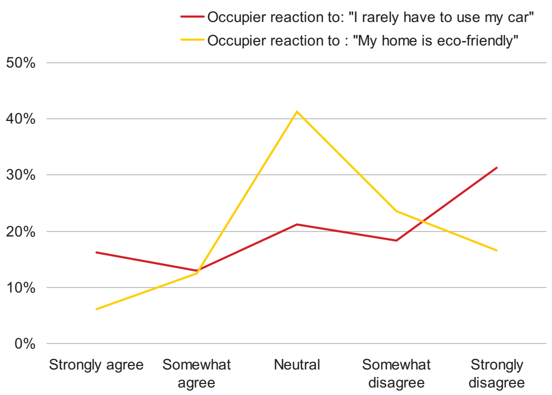
Sustainability issues are considered important



Source: Savills Research

Most respondents to the survey disagreed with the proposition that they rarely need to use their car. It would appear that 50% have to use their car heavily and a further 20% use it a moderate amount. Only 30% use it moderately or rarely. Car usage does not fall under the category of domestic CO_2 emissions (transport usage accounts for a further 28% of the UK's CO_2 output) but it has become a concern to the government inasmuch as planning policy has moved increasingly towards development that provides public transport and has shops and amenities within walking distance, breaking with the current car-usage habits of most occupiers.

...but sustainability-credentials are weak



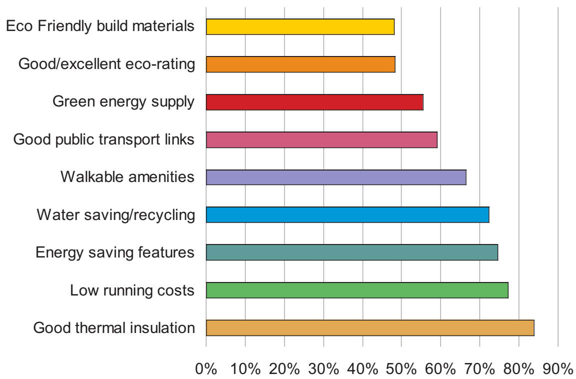
Source: Savills Research

Research

The public would currently seem to appear fairly sceptical of the house building industry's ability to respond to global warming. Happily, slightly more (30%) agreed that new building was environmentally friendly than did not (21%) but nearly half were neutral on the subject. This suggests that some educative public-relations work may be needed if housebuilders want to establish eco-credentials. Despite this, the public do seem to be more aware, at least indirectly, of the impact of building regulation on the thermal performance of new housing. The majority, 61% agreed that new build property is energy efficient and only 10% disagreed.

The perception of energy efficiency is of particular importance to the house building industry because it is a very highly rated attribute amongst occupiers. Energy saving features, low running costs and good thermal insulation were considered important or very important by 74%, 77% and 84% of respondents respectively. In contrast, 'darker green' issues such as renewable energy supply, eco ratings and ecologically-friendly build materials were rated much lower, each being considered important by around just 40% of occupants.

Energy and cost saving is most important



Source: Savills Research

Can sustainability-value be added?

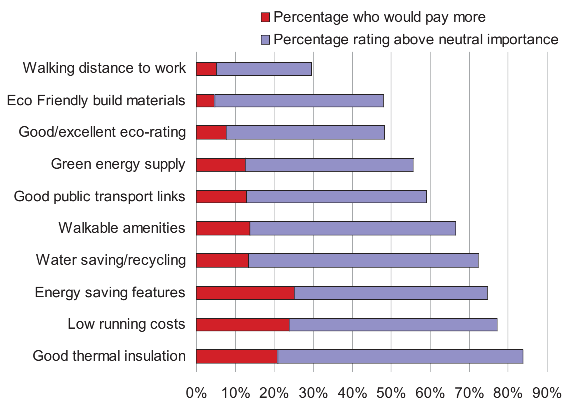
The importance that occupiers attach to various green features seems to be largely related to saving money rather than saving the planet. Low running costs are much more important to people than obtaining energy from renewable sources, for example. When people were asked which eco-features they would actually be prepared to pay more for in a new home, far fewer said they would be prepared to pay than thought them important.

The following chart suggests that the value of eco-friendly features in new homes is not going to be realisable by developers through higher prices although it may be used to gain marketing advantage.

This may be set to change with the introduction of Environmental Performance Certificates (EPC's) as part of the Housing Information Packs (HIP's) in August 2007. The introduction of EPC's will no doubt raise consumer awareness of the environmental performance of their home and the possible implications this may have on their property's value and saleability. At the very least this may feed into the marketing advantage of highly rated sustainable new housing, and may even translate into higher prices.

Setting the possible implications of EPC's aside, what the chart below highlights is that increases in the cost of fuel have probably had more impact on green awareness than other issues. Developers who demonstrate cost savings may be able to achieve higher prices in certain circumstances but most of the value of green features in homes will be indirect contributors to value rather than direct. Eco-features that are considered important to people may be useable in marketing campaigns and could have beneficial impacts on rates of sale. They may become particularly important in differentiating one site from another, especially in locations, such as designated growth areas, where developer's face high levels of competing supply.

Does importance translate into value



Source: Savills Research

It is interesting to note that water saving and recycling features are rated highly by occupiers. This shows that public discussion and awareness around the issue of drought, coupled with measures such as hose pipe bans, can raise public awareness and the importance attached to it. Developers should not ignore the likelihood that environmental sustainability will become much more of a public issue, especially if the security of power supply becomes threatened as it has been in other western countries. Our survey showed that those households headed by younger generations or containing children or students attached greater importance to green issues. These young people, much more aware of sustainability issues, will become the housing consumers of tomorrow and may be much more demanding of eco standards than the current market. Wise developers will stay ahead of the game and look at ways of improving their eco-credentials.

Having established that occupiers are more likely to pay more for eco-features that save them money, a recent event could prove very important to developers. From 1st October 2007, new zero-carbon homes costing up to £500,000 will be zero-rated for stamp duty purposes and those in excess of this will receive a reduction in their stamp duty bill of £15,000. This relief will run to 2012 with a view to extend this thereafter. This could lead to substantial savings for buyers, and could allow developers to incorporate a premium in order to off-set additional build costs. The question then is whether such enhanced value would be sufficient to cover the costs of building zero carbon homes. Also, in design terms, whether achieving carbon neutrality would so change the nature of a property as to render it less valuable than a conventional counterpart.

The cap on stamp duty discount at the higher end will significantly diminish the potential for higher build costs to be offset by increased value at this level of the market where upwards of 9% additional build costs could otherwise have been supported. If the Cyril Sweet analysis is correct, then even the costs of achieving the lower CSH level 5, which will no doubt be cheaper than reaching level 6, will exceed the maximum £15,000 'allowance' against stamp duty on the most expensive properties. Therefore, no property would be capable of totally offsetting costs with stamp duty savings. Also, more importantly, the premium that could be applied to zero-carbon homes may be greatly reduced by the fact that the stamp duty exemption is only applicable to new homes when sold for the first time and is not available on subsequent sales.

While the introduction of this stamp duty exemption will be a valuable tool to off-set additional build costs, its benefits will not be fully felt until 2016 where the CSH target for zero carbon homes is set, and will be dependent on the relief being extended beyond its current 2012 limit. The more imminent issue is to how to bridge the cost/value gap of reaching some of the lower targets of CSH where there is no stamp duty allowances. For example, to meet CSH level 3 which is envisaged to be met on all new housing by 2010 could cost between £3,000 and £6,000 per dwelling.

Ways forward for developers

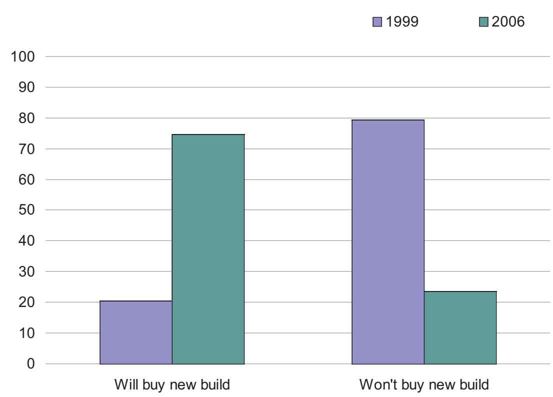
Faced with increasing pressure to build in a more eco-friendly manner, what can developers do to meet targets and regulatory obligations while bridging the cost/value gap of meeting these obligations?

Theoretically, higher build costs should lead to shrinking residuals and therefore lower land prices, thereby squaring the housing equation and not resulting in higher house prices. In practice however, competition for land is fierce because land supply has become increasingly constrained by greenfield policy and limited availability of easily-developable brownfield sites in high-demand locations. If land values cannot 'give' then developer margins will. In order to protect margins, developers have to seek ways of achieving higher values in the properties they build, or over sites as a whole.

Given that our research suggests that eco-features in homes, although required by law, are not going to result in significantly enhanced values over the short term at least, developers have to search for added value elsewhere. This is especially imperative in locations where high concentrations of new-build activity, such as Milton Keynes, Ashford, north Northants, Stansted etc., will tend to suppress values.

Some developers have already found that enhanced design and product diversification, away from the competition, can help to preserve or enhance value. In our view, sustainable homes will have to go hand in hand with improved design and value enhanced in these other ways. Developers will have to go far further in their rethinking of design issues than they have before. In our view, this will go beyond the appearance of individual houses and much more towards the design of whole places. We found the aspiration to live in better neighbourhoods was very strong in our survey of householders so, if developers can cater to these aspirations at the same time as responding to regulation, they will win on both counts.

Occupier attitudes to new build



Source: Savills Research

The search for value has been helped enormously in recent years by changing occupier sentiment towards new homes. Savills survey showed that, whilst only 20% of potential buyers in 1999 would consider a new build property, now, over 70% will. This offers an opportunity for developers to massively broaden their appeal and to attract new customers to whom they would not previously have appealed. Amongst these new customers will be the much more eco-conscious.

Neighbourhood design and placemaking considerations are also relevant to environmental issues. First, developers have to increase the desirability and value of their product to offset increased build costs but it will become increasingly important for developers to consider the nature of the demand for their product, including the demand for the places they create, especially (but not exclusively) on large sites. Developers have the capability to create new locations in the places they build. Placemaking will therefore become an increasingly important part of the development process in both planning and commercial terms.

Second, the creation of place is important to developers for broader environmental reasons. Walkable, high density places with high quality open spaces, good schools, good neighbourhood retail provision, fine-grain commercial uses and substantial health care, community and leisure facilities will be required for reasons of sustainability. The good news for developers is that existing places like this are also amongst the most valuable pieces of real estate in the country. This means that environmentally-friendly development can also be high value development.

In summary, we believe that the real issue is closing the value/cost gap associated with building sustainable homes in line with the Government's CSH standards. In some cases consumers may pay more for homes with a high CSH rating, covering additional build costs, as public awareness of these issues rise on the back of the introduction of EPC's. Stamp duty exemption for zero-carbon homes will also boost value, although it will be limited by the fact exemption only exists for new housing sold for the first time. Over the shorter term it has even less of an impact as it does not apply to low-carbon homes, only zero-carbon. The CSH target for zero carbon homes is set for 2016. The sustainable homes issue undoubtedly means that the nature of housebuilding has changed. Future success belongs to those who successfully implement innovative and cost-effective technologies and also fully exploit the marketing opportunities that increased environmental awareness will create.

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