

The policy requirement for all new houses to be ‘zero carbon’ by 2016 has generated much debate, not least about how zero carbon should be defined and how it can be achieved. Our research has examined how the zero carbon target has been interpreted by designers and developers, and what its adoption might mean for future home life. Are occupants expected to live in certain ways to ensure zero carbon performance, do they require new skills or commitments? Is ‘zero carbon’ something to be judged just when the house is built, or should it be an on-going achievement of continued habitation? To explore these questions we undertook our research with mainstream housing developers and smaller scale, eco-design and communal-housing schemes, to see how perspectives might differ.



Zero carbon social housing,
Park Dale, West Yorkshire



Demonstration house at
BRE Innovation Park



Low carbon housing at the Threshold
Centre co-housing development

Insights

| In the mainstream housing market there is an emphasis on zero carbon homes being ‘normal’ – they should take a familiar form, and not require new practices, knowledge or skills. This reflects concerns that zero carbon homes might be perceived as difficult to inhabit and hard to sell. In the mainstream, the zero carbon test is focussed on construction, as a one-off certification. How the house is lived in remains essentially out of view.

| By contrast, those involved in the design of eco and communal-housing developments view occupants as central to the achievement of zero carbon living. They see the sustainability and carbon performance of new housing as necessarily a matter of how we inhabit our homes, with layout and design intended to enable more sustainable, and often collective, everyday ways of living. And inhabitants are expected to have the motivation and skills to properly utilise eco technologies.

Significance

- | A shift is clearly taking place as a commitment to sustainable housing moves from the eco-housing niche into the mainstream housing market. While technological innovations are being transferred, the idea that living in a zero carbon home means learning new skills and changing everyday practices from what are perceived to be 'normal' is being actively resisted. The technological innovations of eco-housing are being transferred; the related social innovations are being lost.
- | The Code for Sustainable Homes¹ defines zero carbon for design teams, and champions a particular vision of design, construction, and habitation based on building science and assumed norms of resource consumption. For mainstream actors there is a strong emphasis on ensuring that new houses are not only optimised for carbon reduction, but also marketable to a wide range of homebuyers. There is an assumption that low carbon measures are only viable if they fit into the existing expectations of the home buying public. This suggests a reluctance of Government and industry to overtly intervene in matters that are seen to be in the private sphere of home life, at least in terms of sustainability.
- | Alternative visions for zero carbon housing do exist, but projects that involve communal-housing and the sharing of resources remain on the margins because they challenge basic assumptions, for example about single family houses. By introducing ideas of sharing resources and spaces in domestic living, car and bike sharing programmes, and collective food growing, communal schemes challenge what are seen as 'normal' patterns of everyday domestic living.

Implications for Policy and Practice

- | A reluctance to see zero carbon living as challenging what is now seen as 'normal' is resulting in a watering down of the meaning of zero carbon as it enters the mainstream.
- | Calculations of anticipated carbon reductions must take into account that low carbon technologies may not always be used optimally by zero carbon householders.
- | Attention should be given to 'handover processes' when homes are first sold so that owners are better informed about the features of their home.
- | In the mainstream, the Code for Sustainable Homes is interpreted as a set of standards to be met at one moment in time, rather than an on-going achievement. This limits scope for changing patterns of everyday social practices beyond marginally more efficient versions of currently 'normal' ways of life. Could more be done to make zero carbon an ongoing achievement? For example:
 - Could more of the collective and communal infrastructure of eco-housing developments be incorporated into mass housing schemes and, in time, become a 'new normal' of home design?
 - As zero carbon developments become normal, will anxiety about selling these homes diminish, and greater openness about the benefits of householders taking care of their carbon performance become acceptable and routine?
 - Should new requirements, particularly focused around the selling-on of zero carbon homes, be introduced to facilitate wider sharing of the knowledge and skills of low carbon living in everyday practice?

1 Department for Communities and Local Government (2010) Code for Sustainable Homes: technical guidance. Available at: www.gov.uk

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