

PARLIAMENTARY BRIEFING: INFRASTRUCTURE BILL, SECOND READING, HOUSE OF LORDS, 18 JUNE 2014 ZERO CARBON HOMES

Summary

- In the Cabinet Office briefing on the Queen's Speech, the Government undertook to use the Infrastructure Bill to finalise the zero carbon standard for new homes from 2016. While the promise of clarity on the commitment to deliver zero carbon homes in 2016 is very welcome, **the standard being proposed is significantly lower than that already agreed through cross-industry consensus.**
- In doing so Government is forgoing the huge benefits to the UK economy from supporting a world class green building sector creating growth and exports, from reduced natural gas imports and lower energy bills resulting in higher expendable family income.
- The Bill was published on 5 June, but without the promised provisions on zero carbon homes. We regret that Peers will therefore not have the opportunity to debate this critical topic in detail - and **we urge the Government to introduce the relevant amendments as soon as possible to allow for Parliamentary debate** during the Bill's later stages and to allow the house building industry to plan ahead.
- The Government is proposing that a very significant proportion of the carbon savings from a home defined as zero carbon could be offset through "allowable solutions" (i.e. off-site schemes). **We support the use of allowable solutions. However, we call on the Government not to undermine the vision of zero carbon homes but to set the level of carbon savings to be made on site, and those allowable off site, at the optimal point which has been previously agreed through intense cross-sector scrutiny.**
- The Government proposes to exempt 'small sites' from the zero carbon standard altogether. This would result in a two-tiered regulatory environment, house buyer confusion and exploitation. **No exemptions should be permitted to the definition of zero carbon homes.**
- The recognised urgency in solving the problem of housing supply must not take precedence over building future-proof zero carbon homes. The two are not mutually exclusive. Homes of high quality and high energy efficiency standard, which drive down energy bills, protect against fuel poverty and provide healthy environments must be available to families from 2016.

Introduction

The UK's buildings account for 37% of total greenhouse gas emissions, with 66% of buildings' emissions from homes. The UK is committed to reducing emissions by 50% in 2025 and 80% in 2050. Some of the most cost effective potential carbon savings exist in the buildings sector and Government is looking to this sector to deliver significant levels of carbon savings. The commitment to make all new homes zero carbon by 2016 will form a central part of that strategy, alongside the commitment to zero carbon commercial buildings by 2019.

The Cabinet Office briefing on the Queen's Speech indicates that the Infrastructure Bill will provide the legislative vehicle to achieve zero carbon homes by 2016. **We are calling for the Infrastructure Bill to set out clear, robust and visionary legislative measures and to publish these measures at the earliest possible opportunity.**

Background

In 2006 the Labour Government announced that all new homes would be zero carbon from 2016, with three clear steps to be taken in 2010, 2013 and 2016.

The announcement of the zero carbon homes policy had a galvanising effect on the house building industry and supply chain. The UK is now competing with countries like Germany and Sweden to produce some of the best quality, most efficient, innovative and well-designed new homes in Europe.

The most recent of these steps undertaken by the Coalition Government - the revision of Part L of the Building Regulations in 2013 - signalled a weakening of the original level of ambition, with a lower than expected increase in the energy and carbon standard. Recently, and now with only 2 years to 2016, there has been a lack of clarity from Government on what the house building industry can expect as the standard for zero carbon homes. The uncertainty risks undermining the investment made by the wider house building industry including supply chain and manufacturers.

Whilst we welcome the intention to implement a zero carbon standard for new homes for 2016, we cannot support the proposed dilution of that standard. **We therefore call upon the Government to work with industry and Parliament to ensure that the 2016 standard is the same as that already agreed through cross-industry consensus.**

Housing supply: no barrier to zero carbon homes

There is a pressing need to supply a large number of new homes for families across the UK, as is reflected in other parts of the Infrastructure Bill. It is clear that house building must remain financially viable for the private sector which will deliver a large proportion of the housing needed. In responding to the urgent need for new homes, quality and efficiency must not be compromised. Families must be able to afford to heat and light their homes in the future.

The typical additional cost of building a zero carbon semi-detached house has halved since 2011 and could be less than £5,000 at today's prices, expected to fall further to £3,600 by 2020 when most homes will actually need to be built to this standard.¹ This must be compared to the reduction in the annual energy bill for families for generations to come. The annual bill for a family living in a zero carbon 3 bedroom semi-detached home will be £1,220 less than for a Victorian home.²

We maintain that the additional cost of building zero carbon homes is falling continuously as the supply chain evolves and that the issue of urgent housing supply need not undermine the vision of all new homes being zero carbon by 2016.

Government should reflect industry consensus on zero carbon standard

It is important that the definition of zero carbon homes continues to set a course for industry that capitalises on the innovation and capacity already built.

The Government proposal for the zero carbon standard is significantly lower than the standard already agreed. Adoption of this standard would undermine the efforts and progress towards this standard already made within the industry.

In preparation for reaching the 2016 deadline, the Zero Carbon Hub (ZC Hub) was established by government in partnership with the industry to support the delivery of zero carbon homes and to

¹ The delay is due to the usual transitional arrangements and land banks. ZCH and Sweett Group, Feb 2014, [Cost analysis: meeting the zero carbon standard](#).

² NHBC Foundation and ZCH (Feb 2014). [Zero carbon housing: annual energy running](#).

advise officials. The ZC Hub, and specifically members of a cross sector industry and environment task group, spent 3 years considering rigorous scientific analysis and building a consensus about a workable zero carbon homes standard. The zero carbon standard agreed was not set at the most stringent level but represented a balance between costs and technical viability, and with the delivery of carbon savings and energy efficiency for tomorrow's homes. Importantly, industry considered this standard to be deliverable.

The carbon savings from a zero carbon home come from three sources:

- 1) Energy efficiency of the fabric of the building e.g. insulation of the walls, the roof etc
- 2) Low carbon heat and power technologies in or on the site of the home e.g. photovoltaics
- 3) "allowable solutions" - ie off-site schemes

The first two parts, together, are known as "carbon compliance" and are carbon savings delivered "on site". According to the ZC Hub a very large part of a building's carbon savings should come from "on site". The third part should be used to offset the last part of the building's carbon emissions, particularly in circumstances where savings "on site" are too costly. For example when a house is so shaded that photo-voltaics on the roof are not viable.

In the Cabinet Office briefing on Queen's Speech, the Government's proposed "on site" zero carbon homes standard is significantly below that which the Zero Carbon Hub recommended. *"The Zero Carbon Home standard will be set at Level 5 of the Code for Sustainable Homes, but the legislation will allow developers to build to Level 4 as long as they offset through the allowable solutions scheme to achieve Code 5."*³

The ZC Hub agreed standard required a CO₂ reduction of between 56% and 60% for homes and 44% for flats⁴. Government proposes a standard of only a 44% reduction for all homes.

It does not make sense for Government to ignore the huge piece of collaborative work to set the standard at this seemingly arbitrary, lower level. Government is also setting a course for slowing progress on reducing carbon emissions from buildings rather than speeding up.

In doing so Government is transferring a larger part of carbon savings to "allowable solutions". A larger than expected role for allowable solutions would undermine the credibility and public image of zero carbon homes in the UK and would impact the cost effectiveness of carbon savings from the housing stock in the long term. On site carbon savings are readily verifiable and therefore robust. It is more difficult to establish whether off site solutions bring about carbon savings that would not have happened anyway. By reducing the on site standard Government is allowing homes to be built that may need to be upgraded in future to deliver the carbon savings necessary from the building stock. Returning to a home to undertake further energy savings work after it is built and occupied is much more costly.

Before publishing the zero carbon homes amendments to the Infrastructure Bill, we urge the Government to return to the previously agreed standard which reflects industry's advice on what is feasible i.e. a 60% CO₂ reduction for detached homes, a 56% reduction for semi-detached and terraced homes and 44% for flats only.

Exclusions for small sites

The Government is proposing that *"Small sites, which are most commonly developed by small scale house builders, will be exempt"*⁵. Whilst it remains unclear what is meant by "small sites" or by "exemption" (Government states that it will consult on these matters), we strongly oppose

³ The Queen's Speech 2014: background and briefing notes.

⁴ Above 2006 Building Regulations

⁵ The Queen's Speech 2014: background and briefing notes.

this move as it would lead to increased cost and confusion in the supply chain, and a two-tier regulatory environment.

Homes built on small sites form a considerable proportion of the new stock. The planning system currently classifies minor developments as sites of less than 10 units. Assuming the same standard for 'small sites', 12.4% of proposed new homes would be affected⁶.

Creating a disparity between the treatment of different sites opens up the possibility of unforeseen and undesirable outcomes. The artificial division or staging of sites to attract an exemption could slow down the building of new homes, as well as impact fundamental design, orientation and place making principles.

The zero carbon definition already includes a mechanism to enable the costs of compliance to be reduced for sites which are unfairly burdened due to physical constraints, such as size. **We advocate that no exemptions should be made to the definition of a zero carbon home.**

In addition to the UK Green Building Council, this briefing is supported by:



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⁶ Analysis by Barbour ABI for Building referenced in Building Magazine (5 June 2014) [Zero carbon exemption may affect one third of homes](#).