

PARLIAMENTARY BRIEFING: ZERO CARBON HOMES INFRASTRUCTURE BILL, SECOND READING, 8 DECEMBER 2014

Summary

- In the Cabinet Office briefing on the Queen's Speech, the Government undertook to use the Infrastructure Bill to propose the enabling powers for the 'allowable solutions' (off-site carbon saving) mechanism needed to deliver 'zero carbon homes' from 2016. In the House of Lords, these enabling powers were introduced in what is now Clause 32 of the Bill.
- **We support the use of appropriate allowable solutions and the need for the powers provided for by Clause 32. However, in the June Cabinet Office briefing, the Government proposed the minimum 'carbon compliance standard' to be achieved on the site of the home, before allowable solutions can be used. The proposed standard is significantly lower than that previously agreed by all relevant parties, including the housebuilding industry. We believe that there is no justification for diluting the previously agreed standard and that it should be restored. By proposing a lower on-site standard, the 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.**
- In a current consultation the Government has also proposed an exemption for 'small sites' from a significant element of the zero carbon definition. This would result in house buyer confusion and fragmentation of the supply chain. **No exemptions should be permitted to the definition of zero carbon homes.**

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 at least 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 made in 2007 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 Infrastructure Bill proposes enabling powers to be inserted into the Building Act 1984 to allow Building Regulations to make provision for 'allowable solutions' (off-site carbon saving schemes), the final piece of primary legislation needed to deliver the zero carbon homes policy.

Housebuilders will have the option to use off-site carbon saving schemes rather than more effort on-site once the minimum on-site carbon compliance standard has been reached.

Housing supply: no barrier to zero carbon homes

It is widely understood that there is a pressing need to supply a large number of new homes for families across the UK. 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 is expected to fall further 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

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

On-site standard

The Government has proposed, in the Cabinet Office briefing on the Queen's Speech in June and on a number of occasions subsequently, a **zero carbon standard for new homes that is significantly lower than that already agreed through cross-industry consensus:**

*"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 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" - i.e. the optional use of off-site schemes where further effort on-site is prohibitively costly

The first two of these make up the on-site standard.

The previously agreed minimum on-site standard was defined by the Zero Carbon Hub Task Group. The Task Group was made up of representatives from the housebuilding industry bodies (National House Building Council, Federation of Master Builders, Home Builders Federation, House Builders Association), major housebuilding companies, the wider construction industry, consumer and green groups and observers from BIS, CLG and DECC. The minimum on-site standard, to be achieved before 'allowable solutions' can be used, required homes to be built to achieve a CO₂ reduction over 2006 Building Regulations standards of between 56% and 60% for homes, and 44% for flats. Government now proposes a standard (Code Level 4) of only a 44% reduction across the stock.

It is difficult to see on what basis the Government has drawn its conclusion that the previously agreed standards are unworkable today. The available evidence indicates it is both technically and commercially workable and no further evidence has been presented by Government.

- The standard proposed by the Zero Carbon Hub was agreed by a cross-industry Task Group following 18 months of intensive work. It considered the standard to be **eminently workable when it was defined in 2011**.
- The techniques and technologies required to meet this standard are already being delivered at volume in the market. Over 73,000 homes have already been built to Code level 4 or above⁴ and solar PV has been fitted to over 600,000 existing homes supported by the Feed in Tariff⁵.
- Since 2011 the **additional costs of meeting the standard have more than halved**, meaning that the Hub standard is not only workable but now more cost-effective.⁶
- Further, a 2013 public consultation by DCLG revealed that **70% of the respondents supported the use of the Hub standards**. Some of those who disagreed did so because

¹ 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](#).

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

⁴ <https://www.gov.uk/government/statistics/code-for-sustainable-homes-september-2014>

⁵ <https://www.gov.uk/government/collections/feed-in-tariff-statistics>

⁶ ZCHub and Sweett Group, Feb 2014, [Cost analysis: meeting the zero carbon standard](#).

they felt the standards should go further. *“There was a consensus that the research of the Zero Carbon Hub is well balanced and is the only substantial source of data available”.*⁷

To fully grasp the impact of a lowering of the 2016 on-site standard, it is important to recognise the fact that the new standards will affect the majority of homes not in 2016 but nearer to 2020. This is because the majority of homes built in England are not built to the Regulations of the current day. Compliance with Building Regulations is fixed at the time the plans are processed through planning. Significant time can then elapse through the granting of planning permission, financing the development, building and finally completing the homes for sale. Banks of land are held by house builders to ensure an adequate pipeline of land supply over potentially long planning and commencement times. At recent house building levels the large house builders tend to hold land to cover around 4 to 5 years of continued activity.⁸

Therefore the ‘Code level 4’ on-site standard might be almost a **decade out of date by the time many homes are built to that standard**. It is the same standard that many local authorities have been requiring for some time. **It appears that Government is well behind the UK house building industry in its appraisal of capabilities, product innovation, cost of delivery and ambition.**

Small sites exemption

At the beginning of the summer Government announced its proposal that “small sites, which are most commonly developed by small house builders, will be exempt”. Last month more detail was released in a consultation which proposed a preferred option that sites of 10 units or fewer (with a maximum floor area of 1000m²) should be exempted from the carbon savings above the minimum on-site carbon compliance standard, coined as ‘allowable solutions’.

Although the preferred option in the consultation is an exemption from effort over and above the on-site standard, the Government does worryingly also consult on the possibility of a lower on-site standard for homes built on a small site, creating a two-tiered approach to Building Regulations.

We disagree with the key assertion in the consultation that, in exempting small sites from the just the allowable solutions part of the definition, *“all new housing in England would meet a consistently high level of energy efficiency and carbon reductions. Consumers would save the same amount of money on their energy bills whether buying a home built on a small site.”* In this assertion, Government has overlooked the fact of-site ‘allowable solutions’ carbon saving measures are just one option for housebuilders for delivering the carbon savings between the minimum on-site standard and the full zero carbon definition. It is hoped that housebuilders only consider of-site measures if more energy efficiency or renewable energy on the site of the home is prohibitively costly. More carbon saving on the site of the home, which delivers greater bill savings to the householder, is in fact the first of the four delivery mechanisms that Government has proposed for allowable solutions.⁹ To assume that no house builders will attempt to deliver any further carbon savings (over the minimum on-site standard) on the site of the home is to overlook the basic economic sense of investment to add value to the asset and the increasing customer appeal of lower running costs and technologies such as PV.

The allowable solutions mechanism was designed specifically to enable the costs of meeting the full zero carbon standard to be reduced for sites that are unfairly burdened due to physical constraints, such as size. Smaller building sites are specifically the types of development that the allowable solutions mechanism was designed to support towards delivering zero carbon. It therefore seems perverse that these sites are now to be exempt from the part of the definition designed to ensure they can cost effectively comply.

⁷ [Government Response](#) to the Allowable Solutions: Next steps to Zero Carbon consultation July 2014.

⁸ [The Lyons Housing Review](#), 2014 p61.

⁹ <https://www.gov.uk/government/consultations/next-steps-to-zero-carbon-homes-allowable-solutions>

We see no reason why a development of 10 units should be treated differently from one of 11. **Creating a disparity between the treatment of different sites opens up the possibility of unforeseen and undesirable outcomes, and possibly exploitation**, where larger sites are broken down to qualify for the exemption. 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 proposed exemption of sites of 10 units or fewer is shown by the figures presented in the consultation to affect as much as one fifth of all homes proposed (at 2013 rates). This is clearly a considerable proportion of the stock. We believe that an **exemption for such a large proportion of the stock will create confusion in the house buying market**. If a house buyer cannot expect the same standard of a new home built on a small site to that built on a large site, the value of a highly efficient new home will be undermined. Clear market signals are needed if the efficiency of homes is to be recognised in house prices.

Such an exemption would also create **fragmentation in the supply chains delivering products and services for differently defined 'zero carbon' new homes**. Fragmentation leads to a lower potential for cost reduction through the whole supply chain. With small builders making up the smaller part of the demand it is logical that this market will be less well served, suffering from smaller and slower cost reductions. Therefore a perverse outcome of higher costs for the smaller builder is created.

We have yet to see any evidence that exemption from the zero carbon regulations would in fact bring forward more house building activity from small builders. The business challenges for small house builders were summarised in a recent NHBC report (Oct 2014). The top barriers identified in a quantitative survey were: planning and process conditions, obtaining finance, availability and cost of land, and skilled labour and cost of labour. Legislation/red tape was named by only 4% of the 363 companies surveyed. The consultation document also identifies extra costs in terms of land acquisition and purchasing and availability of suitable small sites as barriers to small house builders. **It is not clear how the exemption proposed will help to overcome the above listed significant barriers.**

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