

Consultation on changes to Building Regulations Parts L and F (Conservation of Fuel and Power/Mean of ventilation)

Summary of NHBC's response

Executive summary

This Update summarises NHBC's response and observations on the recent consultation on Parts L and F of the Building Regulations. Key points are:

1. The 25% target appears to be achievable without major changes to specification.
2. NHBC favours an option that allows the 25% reduction to be achieved on an aggregate basis across all homes built, rather than for each and every home.
3. We support the concept of the proposed Accredited Construction Details scheme(s), although we have certain reservations.
4. We lament the lack of evidence to support the proposed changes and note the importance of looking after the consumer interest.
5. As homes become more airtight, maintaining satisfactory indoor air quality is probably NHBC's greatest concern.

Introduction

The CLG consultation on proposed changes to Parts L and F¹ was published on 18 June 2009. The changes outline how the first step (a 25% reduction in CO₂ emissions) in the journey to zero carbon will be achieved.

A summary of the 800 pages of proposals was placed on the NHBC website in July, along with NHBC's initial observations. This information was also published in Sustainability Extra during August (available at www.nhbc.co.uk/sustainability).

During the consultation period, discussions took place with government advisers, Zero Carbon Hub colleagues, house builders, trade associations and others to inform our response.

Due to the number of questions asked (113), the consultation response runs to 47 pages. This paper summarises briefly NHBC's response and observations.

¹ <http://www.communities.gov.uk/publications/planningandbuilding/partlf2010consultation>

Is 25% achievable?

In order to understand the impact of the proposals it is necessary undertake modelling of house types using SAP (the Standard Assessment Procedure). As SAP is, itself, currently under review, it is the combination of the revisions to both SAP and Part L that will determine future build specifications.

To facilitate the modelling, 'Consultation SAP' (cSAP) software was made available by CLG, and the Zero Carbon Hub and the Modern Masonry Alliance used this software to model various types of homes. In brief summary, the modelling shows that relatively modest changes to the fabric specification should be sufficient to enable most current homes to pass Part L 2010 without requiring the use of microgeneration technology.

The explanation is that 'the party wall bypass²' has been identified as a major source of heat loss and the SAP has been adjusted to take account of this. Provided that the specification is changed to include sealing the cavities of party walls, a major contribution towards the 25% is gained. Additionally, an amendment which reflects the banning of incandescent bulbs and so assumes that a greater proportion of low energy bulbs will be installed, also makes a worthwhile further contribution towards achieving the 25% target.

One anomaly demonstrated by the modelling is that achieving compliance for homes heated by biomass is relatively challenging (i.e. additional improvements to the specification are needed). This is perverse as biomass (e.g. wood pellets) is not a fossil fuel and its use would therefore be expected to make a good contribution towards reaching the target. We would expect this anomaly to be addressed by an adjustment to SAP.

Some commentators have observed that, a relatively easy step in 2010 is undesirable as it merely saves up a bigger change for the future (i.e. in 2013 and 2016). We do not support this view because:

- the reduction in CO₂ emissions that will be made at this stage *is* genuine (accepting that the false previous assumption that heat is not lost through party walls has now been addressed), and
- the recovery that we hope will happen over the next couple of years will put the industry in a better position to cope with the next step change to regulations from 2013. At that stage there will be no loopholes left to close so all improvements will be 'real'.

² See *Sustainability Extra* 5 page 2 'An end to the party wall bypass'

Flat v Aggregate?

The proposals outlined two options:

- the 'flat approach' – applying the 25% to each and every home
- the 'aggregate approach' – achieving the 25% across all homes built to Part L 2010.

The aggregate approach recognises that for certain built forms, such as mid-floor flats, it is disproportionately challenging to achieve the 25%, whereas for others, such as detached houses, it is relatively easy. Peculiarly, it is those which are inherently energy efficient (principally because they have a small exposed surface area) that are most disadvantaged by the flat approach.

NHBC expressed a preference for the aggregate approach. We consider that built forms which are inherently energy efficient should *not* be penalised and that the perverse outcomes and disproportionate costs that could be encouraged by the 'flat approach' need to be avoided. We also noted from the Regulatory Impact Assessment that the aggregate option is more cost-effective - and this adds further justification, particularly given the present economic conditions.

Accredited Construction Details scheme(s)

As homes become more highly insulated and energy efficient, linear thermal bridging – the heat loss that occurs at junctions (e.g. around windows) grows in significance. In order to improve control in this area it is proposed that one or more 'Accredited Construction Details (ACD) schemes' should be set up. Along the lines of the Robust Details Ltd (RDL) scheme for Part E (sound), a set of construction details designed to limit thermal bridging would be assembled and their use by builders would be registered with a scheme provider. Builders wishing to gain the benefit of using those details would make a payment to the scheme provider, who would use the funds to run and maintain the scheme, inspect a sample of construction of the accredited details on site and monitor their performance.

NHBC recognises the significant general improvement to the acoustic performance of separating walls and floors that has occurred as the result of the RDL scheme and we therefore support the notion of a similar scheme for Part L. However our consultation response included the following observations:

- we expressed concern that too much faith may be being put into a scheme that has yet to be proven in the context of Part L (which is likely to be much more complicated than Part E)

- we expressed concern at the timescale within which the scheme will need to be up and running with a comprehensive library of ACDs available to cover the very large number of common details
- we also said that there should be one operator only as multiple schemes would cause confusion and dilute the potential benefit.

Lack of evidence?

Throughout our response to the consultation, we make reference to the lack of evidence upon which significant change is being based. On the one hand, we welcome the research work at Stamford Brook undertaken by Leeds Metropolitan University, that has informed these proposals, most notably in respect of the 'party wall bypass'. On the other, there is a real concern that the results could be being over-extrapolated – is it right to base changes that affect all future homes on a handful of results related to a single type of construction?

We said we would like to see a better evidence base being built up to inform future proposals to amend building regulations. We also raised concerns about the predetermined timetable for future changes on the basis that evidence should be gathered of performance in use from one set of changes to building regulations before we move onto the next. We made clear that we must not lose sight of the owner's/ occupier's interests as we move towards zero carbon.

Indoor air quality

Probably of greatest concern to NHBC, and closely linked with the consumer interest is indoor air quality. Airtightness is increasingly targeted as way of reducing heat loss through adventitious ventilation and there will be increased emphasis on the use of mechanical ventilation systems with heat recovery to maintain indoor air quality and manage condensation and mould growth in the future.

Due to our concerns, through the NHBC Foundation, we recently commissioned a desk study to evaluate existing research in this area – to look at what had already been learned, both in the UK, and overseas. Rather than allaying our concerns, the study³ has highlighted problems already identified through research and it makes recommendations for further UK study. We have made CLG aware of the desk study and the need for further work, and this is also highlighted in our response. The Foundation is currently considering the best way of undertaking further work in this area.

³ *Indoor air quality in highly energy efficient homes – a review*, NHBC Foundation July 2009, available at www.NHBCFoundation.org

What next?

The consultation closed on 17 September 2009. CLG will be considering the responses received over the next three months and a summary of these will be placed on the CLG website. The revised Approved Documents should be finalised in spring 2010 and are likely to come into effect in October 2010. They will apply in England; their application in Wales will depend on progress made with the devolution of building control. Transitional provisions are not yet known.