



THE HOME BUILDERS FEDERATION

Mr C Mountain
Climate Change and Sustainable Development Team
Department for Communities and Local Government
Zone 4/G6
Eland House
Bressenden Place
LONDON
SW1E 5DU

T/6/DM

8 March 2007

Dear Mr Mountain

**Building a Greener Future:
A step change in sustainable home building practice.**

HBF is the principal trade organisation representing the interests of house builders in England and Wales. Our members include companies of all sizes, ranging from multi-national household names through regionally based businesses and small local companies. They are responsible for more than 80% of the new homes built every year.

We attach our response to the questions in the above consultation and would also make the following comments.

Whilst we are fully supportive of the 10 year framework for zero carbon, we must focus on the dual requirement for zero carbon and increased housing supply. The quest for zero carbon should not jeopardise the government's wish to see this increase.

HBF has been in discussions with the Government for some time about the future direction of building regulations and within this dialogue has been supportive of the idea of a 10-year target for achieving an agreed zero carbon standard for the performance of new homes, even though this is seen as an extremely challenging timescale. Considerable thought needs to be given to the investment timescale given the scale of investment required and the innovation timescale within this framework. Also within the timescale we need

to build up volume production and bring down costs. If we rush the timescale, we risk having to find very unsatisfactory solutions.

We are concerned that there are several varying definitions of 'zero carbon' in circulation. It is vital that a final and permanent definition be established at the earliest feasible opportunity in order to help us focus on what action needs to be taken through building regulations and other appropriate policy and regulatory channels. This will enable us to measure our progress and ensure everyone is clear about what we are trying to achieve in particular areas and through particular policy and regulatory routes. It is also essential for the housing supply, house building and energy supply industries to have clear objectives as soon as possible before they begin to make the substantial financial and resource investments that will be required to meet these objectives.

Our view is also that in order to determine the definition of zero carbon homes we need a better understanding of what may be possible in a number of different fields.

Although we have made the case strongly in our discussions with Government for a level playing field through national building regulations, there are in fact a number of playing fields that are relevant to the achievement of zero carbon homes and, perhaps more importantly, zero carbon development – and which also need to be level.

Building regulations cannot, for example, apply to all aspects of home energy use since they cannot control the number and use of consumer electronic devices imported into the home following construction. We are currently experiencing a period of very rapid growth in the ownership and use of such devices and so it will be essential to know what the performance standards of such equipment are in order to have a better idea of potential requirements for energy in our future homes. The answer to this set of questions will in turn inform estimates of the amount of energy that homes will require to be supplied from sources outside the individual home itself. For similar reasons, we would also wish to see 'standby' use excluded from the definition for building regulation purposes because this is an issue for electrical goods manufacturers and users, and thus outside the control of any developer.

Another area outside the scope of building regulations which is vital to the achievement of zero carbon development is energy supply. All the information we currently have suggests that it will not be possible consistently to meet future home energy requirements solely from micro-generation and solar devices attached to the individual home. Since many developments comprise only a small number of units it is also unlikely in many cases to be viable to provide dedicated zero carbon energy solutions for those individual sites. In addition, the viability of new energy supply facilities is generally dependent on a reasonable spread in the load requirement through the day. Arrangements focused purely on serving individual dwellings, or individual, comparatively small, residential developments may well be sub-optimal because they would involve early morning and evening peaks in demand with

relatively little demand at other times. For all these reasons therefore it will often be preferable to look at wider community solutions rather than individual development site solutions. Such wider solutions would also of course achieve wider benefits by providing low or zero carbon energy to existing homes and businesses.

As we have discussed in the 2016 Task Force, it may well be too that in some cases the most efficient low or zero carbon energy supply solutions will be ones that use sources from outside the immediate community or district.

We do not in sum think that we know all the right answers at present on energy supply and the solutions will almost certainly be different in different cases, taking into account the local geological and geographical context, the size of the development and the opportunities for synergies with other local development amongst other factors.

It will therefore be important to understand how the full range of possible zero carbon energy solutions can best be accommodated through the national energy policy and regulatory framework and to identify what changes may need to be made to these to facilitate investment in effective and efficient supply. A clear level playing field will be required in this area to ensure that the best zero carbon solution can be selected in each case without closing off any reasonable option. If the regulatory and policy framework does not empower this approach we will put at risk housing delivery.

The other critical area is the role of local authorities and planning policy. We are replying separately to the consultation on the draft PPS on climate change, but as you will be aware, we are concerned that local authorities should not develop their own local building standards as a part of planning policy as this will undoubtedly complicate and frustrate the delivery of the volume of zero carbon homes we wish to see in 2016.

We do believe therefore that it will be vital to reach agreement on defining the positive role that local authorities can best play in helping to achieve zero carbon development. This will involve planning policy. Guidelines on development wide urban design that add value to zero carbon solutions – for example, connected with orientation and the use of green sinks - would be welcome. Local authorities are also likely to have an important part to play in facilitating planning approval for new low or zero carbon energy supply facilities.

The most important role for local authorities may well lie outside planning policy, however. Given that energy supply solutions are often likely to be community rather than individual development solutions, local authorities could be in the best position to bring relevant parties together to realise such projects – whether through ESCOs or otherwise.

I should add that at a technical level many are unrealistic in their expectations of the performance of current and future technologies, particularly micro-generation, and somewhat optimistic about the willingness (and ability) of

future home owners to pay for them. While we believe that renewable technologies are developing at a rapid pace it is essential to take a practical approach to the options available now and to allow scope for change as future innovations become available.

In conclusion, to achieve a 'zero carbon' result for all new homes by 2016 is an extremely ambitious target and will require substantial investment by a range of stakeholders (construction products companies, house builders, energy suppliers). Through our work at the HBF zero carbon homes summit in January and more recently in the 2016 Task Force, it has become apparent that achievement of this target entails a range of issues that extends beyond the scope of those set out in the *Building a Greener Future* consultation document in important respects.

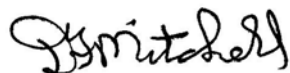
We believe it is essential for this wider picture to be considered in determining the agreed approach for the next ten years. In turn that requires a clear vision of what can be achieved via each of the main policy and regulatory routes that relates to the wider picture.

We strongly support the proposed staged ten year timetable for changes in building regulations relating to carbon emissions, but as indicated above we would wish to see a clear understanding on what can realistically be covered by these regulations.

Alongside this framework for building regulations, we also need clear rules on performance standards for consumer electronic goods not covered by building regulations, a suitable policy and regulatory framework for energy supply, a clearly defined role for planning policy where it can genuinely add value and a positive vision of how local authorities can facilitate community solutions in fields such as energy supply.

Putting all this together suggests that our overall zero carbon vision should not be focused only on the home, but on the zero carbon residential development as part of a wider community response to climate change. We believe we should therefore aim for an overall definition that accommodates this holistic vision.

Yours sincerely

A handwritten signature in black ink, appearing to read 'D F Mitchell', written in a cursive style.

D F Mitchell
Technical Director

HBF response to the CLG consultation *Building a Greener Future: A step change in sustainable home building practice.*

HBF is the principal trade organisation representing the interests of house builders in England and Wales. Our members include companies of all sizes, ranging from multi-national household names through regionally based businesses and small local companies. They are responsible for more than 80% of the new homes built every year.

HBF has been in discussions with the Government for some time about the future direction of building regulations etc and has been supportive of the idea of a 10-year target, even though this is seen as an extremely challenging timescale.

General Comments

We are concerned that there are several varying definitions of 'zero carbon' in circulation. It is absolutely vital that a final and permanent definition be established at the beginning of the consultation period in order that we can measure our progress and that everyone is clear about what we are trying to achieve. We would wish to see 'standby' use excluded from the definition because it is a behavioural issue outside the control of any developer.

It is also imperative that the 10-year target be applied nationally. We are already seeing attempts by regional authorities to impose escalating aspirational conditions on development. While we appreciate that many of these are motivated by a commitment to sustainability rather than a desire to stop further development, nonetheless the impact of ill-judged and misunderstood technical conditions are creating serious obstacles to the supply of housing. It is important that these policies are reigned back early, before they have an adverse impact on housing supply, and because it will be much more difficult to alter them once they have been in place for some time.

One of our other key concerns is the current and future availability of renewable energy sources without which the final target will not be achievable. Many enthusiasts are unrealistic in their expectations of the performance of current and future technologies and somewhat optimistic about the willingness (and ability) of future home owners to pay for them. While we believe that renewable technologies are developing at a rapid pace it is essential to take a practical approach to the options available now and to allow scope for change as future innovations become available.

1. Are we right about the need for new housing to lead the way in delivering low-carbon and zero-carbon housing and is it achievable in the timescale we have set out?

We believe the Government is right about the need for new housing to take the lead, as everything we build today becomes part of the existing housing stock of tomorrow. However, we should not lose sight of the major gains that can be made for second hand housing with

existing low tech solutions such as insulation, new boilers etc. It is also the case that quite minor improvements to existing stock (and non domestic buildings) will have a much greater impact on CO₂ emissions in the short term, or that a much greater reduction in emissions could be achieved for a given amount of money by investing in the existing stock rather than new housing. Annual production of new housing constitutes around 1% of dwellings in this country and the 2002 Part L offered a significant improvement on the 1995 regulations. New housing is already much more energy efficient than properties built in the last century, so that investment in new homes will experience diminishing returns

Urban regeneration and/or major refurbishment projects of the existing housing stock could offer an opportunity to deliver lower carbon development. While we are keen to be leaders there should be mechanisms in place to ensure that existing homes follow and that undue requirements or expectations are not placed on new build alone.

It is imperative that energy providers also address these issues.

Energy efficiency could well become an important selling point for new housing particularly once EPCs are required.

In terms of the timetable this is seen as very challenging. While there are very good examples of sustainable and energy efficient housing being built, these are almost exclusively to some extent being subsidised by the public sector. There are very few examples of genuine zero carbon development currently, and none on any volume scale.

A 10-year target would require significant resources from industry and government as well as a pull through from consumer demand that does not yet exist as a tangible force as opposed to a nascent aspiration.

A three-stage approach would seem to be the way forward.

2. Have we got the assessment of costs and benefits right?

HBF would generally expect that the predicted costs are underestimated.

The RIA only gives cost figures for Code Levels 3 and 4, not for “zero carbon”.

We do not believe that we would be able to pass these costs onto homebuyers in the present climate. While it may be possible to persuade some of the public that they should spend more on energy saving measures, the majority of the home buying public is struggling with increasing levels of debt and is unlikely to believe that spending

more now would save them money in the future – or at least that any savings are a material factor for them.

It is also worth noting that the difference in space and water heating costs between a zero carbon home and a Part L 2006 home would be very small.

The cost estimates in the consultation document also appear to make no allowance for energy supply investment other than micro-generation attached to the individual home. This is an important additional consideration in terms of cost estimates.

3. Have we got the balance right between the contribution of the planning system and that of building regulations? Are there other policy instruments we should consider? Are there ways in which we can design our policy instruments to achieve the same goals more effectively?

It is vital to have a clear vision of what can be achieved via particular policy and regulatory levers relevant to the vision of zero carbon residential development set out in our covering letter.

Separate consideration needs to be given to setting out clear rules on performance standards for consumer electronic goods not covered by building regulations, a suitable policy and regulatory framework for energy supply, a clearly defined role for planning policy where it can genuinely add value and a positive vision of how local authorities can facilitate community solutions in fields such as energy supply.

We have for a long time now believed that building performance is not a planning issue but one that should be dealt with under the building regulations.

If the intention is to use the planning system then limits should be set nationally and where planning authorities can justify additional targets these should be based on carbon dioxide reduction (i.e. not policies such as “10% renewables” etc). The use of new technologies is dependent on economies of scale driving prices downwards and this will only happen if there is repetition, consistency and the same rules across the country.

The consultation also sets out a timetable and if it is to be met there can be no scope for competing alternative timescales in different parts of the country. The construction supply, house building and energy supply industries must have a clear and realistic timetable if they are to make the very substantial investments required to meet the zero-carbon target.

4. Are there significant solutions to climate change that our policy framework does not encourage and are there other things we should be doing to address this?

We believe that there is scope for government to give greater fiscal incentives for customers to be willing to pay more for an energy efficient homes. A mechanism could be put in place through the Council Tax system, linked to EPCs. The stamp duty exemption for zero carbon homes is welcome but it will be some time before there are sufficient numbers of eligible properties to have an impact.

More also needs to be done to encourage reduced carbon emissions from the second-hand housing stock, new non-residential development and the existing non-residential building stock.

It is also vital to consider changes to the energy policy and regulatory regime in order to overcome any obstacles that exist to the development of efficient zero carbon energy supply and the flow of commercial investment into such options.

5. Are we right in our assessment of what we should do to seek to achieve through the planning system and through building regulations? Are there other policy instruments we should consider?

We believe that there is still ambiguity about the extent to which planning legislation may be used to supersede building regulations and the potential for sustainability issues to be used to frustrate development. As stated previously we believe that performance standards for buildings should be regulated solely by building regulations. The Government sees the Code for Sustainable Homes as indicating the future direction for building regulations, which substantiates this view.

Central Government needs to give clear guidance to local authorities to stop the proliferation of local policies before these begin to have an adverse impact on housing supply. Reversing such policies once they have been in place for some time, and once the damage is done, will be much more difficult than stopping them from the outset.

We need to consider energy policy and regulatory measures as well as the planning system and building regulations. The scope of inquiry and possible change should extend as far as understanding the issues that may arise in respect of current trading and balancing rules for the national grid on the one hand and the provision of smart meters and information to consumers about how they can sell home produced energy into the grid on the other hand.

Standards of performance for consumer electronic equipment not covered by building regulations also need to be considered.

6. Are there areas of duplicative or even conflicting regulation in the framework that we have described? Do these threaten to get in the way of meeting the goals we have set?

The main problem is that planning policies at local level are chaotic with each authority trying to demonstrate that it is 'greener' than its neighbour. The focus is too often on individual technologies irrespective of their efficiency or effectiveness, cost or impact on the financial viability of development and housing supply. It is essential that there be a clear delineation of which aspects of building are covered by planning and which by building control.

Current energy regulation could also conflict with other regulation if, for instance, building and planning regulation were too prescriptive in terms of matters such as on-site provision of renewable energy. To the extent that there are practical issues involved in bringing renewables projects on stream (e.g. connection to the grid and running arrangements) the wrong emphasis on on-site provision might create an unwelcome barrier to housing supply and close off potentially more effective and efficient broader community-wide energy solutions..

7. Do you agree that all new homes should receive a rating against the standards set out in the Code for Sustainable Homes should be mandatory from April 2008?

So far as carbon emissions are concerned, we do not believe this would add much value. EPCs will be required from 1 June and customers already know and understand the A-G bandings from their use on white goods. Why not rely on the EPC until 2010 when Code Level 3 will be required under the Building Regulations?

8. Do you believe that our timetable for delivering zero carbon development through more stringent building regulations is sensible and achievable or too stringent or not stringent enough?

There is no doubt that developers must play their part in tackling climate change and global warming. The way to improve building performance is through building regulation as far as possible. However, while a single zero carbon home is feasible, there are difficulties in reaching such targets for mixed developments where a variety of uses complicates the calculations of import or export of carbon over a year. The final definition of 'zero carbon' needs to address this. Whether the timescale for achieving zero carbon is realistic depends on the final definition of zero carbon. That in turn depends on the answer to some of the other questions we have raised in our response.

It also needs to be appreciated that the energy efficiency of buildings and the efficiency of energy production are two different things. Energy efficiency is (easily) controlled by building regulations but energy generation, unless linked to the individual dwelling (which is unlikely to

be achievable) is more difficult. It is also the case for the foreseeable future that the lifetime of a building considerably exceeds the lifetime of most micro-generation and other renewables so the initial cost of renewables does not represent a lifetime cost.

9. Do you think our assessment of the costs of achieving these targets is realistic? Can you offer additional supporting evidence on costs?

The consultation does not give any assessment of the costs for achieving zero carbon homes.

The assessment of costs for achieving the lower targets is not realistic as it takes no account of energy supply issues and investment requirements (as opposed to technology issues) - particularly if there is a wish to promote on-site renewables. There is a gap in thinking outside any micro-generation incorporated in individual homes. This is a significant gap, which must be addressed if we are to make progress.

Even just estimating costs for renewables is suspect because of the variability inherent in the use of different technologies. It would be unwise to assume that the cost of renewables will diminish - the experience in Germany was that the price of silicon and increased demand for PVs (plus a lack of competition) have ensured that the cost of PVs has not decreased to anything like the extent that was predicted. Commentators are already pointing to the possible escalation in costs for biomass given the UK land use implications.

Also, there is no allowance for the costs of maintenance and replacement or indeed the CDM aspects of installation and maintenance.

10. We believe that a zero carbon target is the most robust framework for reducing the carbon footprint of new development. Do you agree that our definition of zero-carbon in paragraph 2.3.3 is the right approach? Where there are circumstances in which the additionality of offsetting measures outside the development can be demonstrated and are more cost-effective (e.g. on small infill developments) is there a case for carbon neutrality (i.e. taking account of offsetting measures)?

There is a good case for a wider definition of zero carbon. A small infill development alone might not warrant major investment in a local generation system and yet there might be several such developments in a vicinity or a larger development nearby which would justify such an approach as more cost-effective (and more successful) than an insistence on, say, PVs for each dwelling. If the wish is to encourage district heating etc a broader view is also needed taking in supply options for commercial, industrial and leisure facilities as well as existing homes. Energy supply solutions may also need to be sourced from outside the local area. Too narrow a definition could therefore

unintentionally limit sensible and cost-effective options for achieving the overall objective.

It is not clear how the generation/use will be calculated or how compliance will (could?) be measured.

- 11.** Does the framework that we describe give adequate room to authorities and developers to make the best use of the opportunities available at different spatial levels for example district heating and district cooling?

While the proposed framework does offer scope for the introduction of district heating and cooling systems, developers may well not wish to become utility companies and some thought should be given to encouraging the provision of such services by existing utility providers or companies outside the utility sector.

It is also possible that such schemes would not work for residential developments with a declining demand for space heating (due to increased insulation and/or global warming) and solar water heating - again a combination of cost-effective technologies might offer a more efficient way of achieving the targets and such flexibility is essential to allow for the potential development of alternative and better technologies.

- 12.** Do you agree that for the reasons set out there should be a national strategy for regulating the emissions from buildings supported by local promotion of renewable and low-carbon energy supply?

We agree that the strategy must be national but would seek further clarification of the term 'local promotion'. Local generation should be encouraged but LAs should not interpret this as an opportunity to impose more onerous or prescriptive targets in their area.

It could also be argued that promoting local low and zero carbon generation may not be the best way to achieve efficient lower carbon developments or efficient zero carbon energy supply. It may be that bringing on additional zero carbon supply capacity via the existing 'grid' systems for generation and supply offer a more efficient and cost effective way of supplying zero carbon energy in at least some cases, certainly to residential developments, and this might be a better approach to take and facilitate in those circumstances.

A national programme to educate the public about sustainability is essential. We need the public 'buy in' to "zero carbon".

- 13.** Are we right to assume that our twin goals of delivering the new homes that are needed and reducing emissions from the housing stock - will be achieved more effectively by relying on national standards (i.e.

building regulations and the code) than through encouraging earlier action by individual local authorities?

Yes - this cannot be overemphasised. The standards must be national to give the certainty that will encourage cost-efficient and customer-friendly innovation and deliver the essential increase in housing supply whilst progressing towards “zero carbon”.

- 14.** Given that the proposed PPS on climate change will apply in England but not in Wales are there any specific implications in Wales for the future direction of building regulations implied by this consultation?

No. Whatever definition and target is set for achieving ‘zero carbon’ buildings, it is essential that targets are consistent for the whole of the UK - anything else would create confusion and disorder that will adversely affect housing supply.