



Housing Standards Review

Consultation Response

How to respond:

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(i) **Are the views expressed on this consultation an official response from the organisation you represent or your own personal views?**

Organisational response



Personal views

Are the views expressed on this consultation in connection with your membership or support of any group? If yes please state name of group:

Yes



Name of group:

Chartered Institution of Building Services Engineers

The Chartered Institution of Building Services Engineers is the professional body that exists to:

'support the Science, Art and Practice of building services engineering, by providing our members and the public with first class information'

CIBSE members are the engineers who design, install, operate, maintain and refurbish the energy using systems installed in buildings, including homes, and are specifically trained in the assessment of heat loss from building fabric and the design of energy using systems for the provision of heating and hot water, lighting, ventilation and cooling and small power distribution in homes.

As an Institution CIBSE publishes Guidance and Codes which provide best practice advice and are internationally recognised as authoritative. The CIBSE Knowledge Portal, makes our Guidance available online to all CIBSE members and is the leading systematic engineering resource for the building services sector. Over the last twentyone months it has been accessed over 200,000 times, and is used regularly by our members to access the latest guidance material for the profession. Currently we have users in over 170 countries, demonstrating the world leading position of UK engineering expertise in this field.

CIBSE is pleased to respond to DCLG's consultation on the Government's Housing Standards Review. As a general observation we welcome the proposals to review the standards relating in particular to energy use and sustainability of homes.

CIBSE's full response to the questions posed by the Department is set out below.

This response has been prepared by the CIBSE Homes for the Future Group, a Specialist Interest Group of the Institution, which is made up of a very wide range of specialist interests in the domestic buildings sector, including those involved in the mixed use sector and social housing provision. In addition, it also has contributions from the Technology Committee of the Institution, who have reviewed and approved the response.

Introductory Remarks

CIBSE supports the review of technical standards relating to housebuilding. We contributed to the review of building control in 2007, and to the Future of Building Regulations exercise launched in 2010.

Our response to the Future of Building Control noted the need for a system of technical regulation of buildings, and supported the current system of functional Building Regulations setting out the statutory minimum standards which must be met, supported by the statutory guidance contained in the Approved Documents. Our response also supported the system of triennial review of regulations, and the process of consultation and stakeholder engagement used to develop changes to the Regulations and statutory guidance.

CIBSE confirms its support for the overall system of technical building regulations currently operating in England.

However, we recognise that over recent years a significant body of additional “technical standards” and other guidance has developed in response to the sustainability agenda, accessibility requirements and a focus on greater home security. These standards offer a mechanism for those who wish to apply higher standards than currently required to satisfy the minimum levels set out in the Building Regulations.

CIBSE recognises that the current arrangements, in which Building Regulations set a minimum standard across England, which are then liable to be supplemented by additional planning requirements which impose further technical demands on developers, lead to a highly fragmented and inefficient situation, in which almost every development may potentially be subject to a unique set of requirements.

In the case of housing, where there is a relatively high level of replication of unit designs, and where efficiency depends on delivering the broadly similar units across a number of separate development sites, there is a real tension between the genuine needs of local requirements, and the economic benefits of greater standardisation.

Examples of local needs might include a requirement for greater attention to accessibility due to local demographics, or consideration of enhanced drainage provision in an area of high rainfall, or local requirements for localised energy generation as part of a strategy to reinforce grid provision, or where the grid is already stressed and may not be able to be reinforced for some time.

In all of these cases there should be a reasoned technical rationale which can be justified, consulted upon and tested, and which then applies across the area. We do not believe that this approach would apply in the case of energy performance, which should be addressed entirely by Building Regulations.

The specific requirements which exceed building regulations then need to be enshrined in some form of standards, and the proposal for a national set of recognised standards, whether they are formal British, European or even International Standards, or whether they are authoritative professional guidance, provides a way to describe the set of additional requirements which may be drawn upon in response to the specific local requirements identified in the manner described above.

There is also the issue of innovation. As we seek to improve the standards of the buildings in which we live and work, there will always be those who strive to go beyond the minimum legal standard. Indeed, a building and construction sector in which nobody ever attempted to go beyond the absolute minimum requirements for health, safety, security and conservation of energy enshrined in building regulations would be very bad for UK plc. Such a sector would not be able to deliver the Olympic Park, Crossrail, The Leadenhall Building, the new Parliamentary Building, or many other recognised exemplary buildings in which minimum standards have been far exceeded. A construction and building sector that is able to export its expertise and achievements needs a framework in which innovation can be codified into standards, adopted more widely and, once it is recognised as being appropriate, incorporated into building regulations as the new minimum standard which all are expected to achieve.

This requires a layer of voluntary standards that set requirements which exceed the absolute legal minimum, and can be adopted by those that wish to. Adopting a set of nationally described standards, which form this additional layer, would enable the industry as a whole, supply and demand side, to benefit from a recognised body of standards, and provide a degree of clarity over what might reasonably be expected above and beyond the legal minimum.

We do not believe that this set of standards as a whole can ever be fully absorbed into building regulations, but rather that specific requirements will emerge, be adopted within the nationally recognised standards, and in some cases will then be absorbed into building regulations. Many of the energy provisions of the Code for Sustainable Homes have effectively taken this journey already, which is why we consider that energy performance provisions should fall wholly within the scope of Building Regulations.

Responses to Questions

Q1 Which of the options set out above do you prefer.

CIBSE Response

For the reasons set out above, CIBSE believes that with the exception of energy performance requirements **Option A** should be adopted.

We do not believe that Option C can be fully adopted within the current legal framework of the Building Act 1984.

The set of nationally described standards should be a dynamic set of agreed technical requirements, subject to revision, amendment, improvement, and, in some cases, leading to the uptake of elements of the set into future building regulations.

The nationally described standards offers a mechanism to balance the competing demands of local technical needs, standardisation across local authorities, and to moderate the growing tendency for planners to set de-facto technical standards which are not subject to any of the safeguards and consultation arrangements which apply to Building Regulations and would apply to the nationally described standards.

Q2 Do you agree that there should be a group to keep the nationally described standards under review

CIBSE Response

CIBSE sees no reason to create a new body, but proposes that this activity is undertaken by BRAC, to ensure that there is a clear continuity and consistency between the standards and the full Regulations.

Q5 Do you agree that minimum requirements for accessibility should be maintained in Building Regulations?

CIBSE Response

Yes

Q19 Do you think a space standard is necessary

CIBSE Response

Yes, without caveats about access. Minimum space standards should be seen as a matter of health and safety and covered in the technical requirements of the building regulations, for all dwellings of any tenure. The minimum requirement should be technical, not a planning consideration, although planning requirements that are set subject to proper analysis, justification and local testing should be allowed.

Minimum space standards might also assist in addressing the issue of space for proper storage of waste and recycling containers (see Q26).

Q26 What issues or material do you consider need be included in H6 of the Building Regulations, in order to address the issues identified above?

CIBSE Response

As noted above, waste container storage is a functional requirement needing a certain space allocation. This should be a technical matter, not a planning issue. Building Regulations should clearly set out the minimum requirements for the safe and healthy storage of waste containers.

They might also usefully consider the need for those containers to be moved in a safe and healthy manner to the boundary of the property for disposal purposes.

If space for storage is covered in the regulations, then some consideration should be given to the nature of the waste to be stored and the duration of storage, ie frequency of collections.

We do not understand the term “bin blight” and question the appropriateness of such a vague and ill defined term in a technical consultation document. If it refers to the proliferation of waste containers outside homes, then given that there are 26 million homes and that we currently build just over 100,000 new homes a year, the impact of these measures on the average english street will be negligible for many years to come.

If the government genuinely wishes to remove waste containers from streets in a significant quantity, then it would need to consider adopting additional standards in relation to works on existing buildings. It could, for example, adopt requirements to incorporate reasonable provision for the storage of waste disposal containers in refurbished (or converted) residential developments. It could even consider extending such a requirement as a form of consequential improvement when residential property is extended or upgraded. However, we anticipate that this might not be considered an acceptable extension of the regulations.

Q28 Do you support the view that domestic security for new homes should be covered by national standards/Building Regulations or should it be left to market forces/other?

CIBSE Response

Domestic security is a fundamental need underpinning well being and health. The Association of Chief Police Officers have a significant body of evidence demonstrating the considerable economic burdens of homes with poor levels of security and, conversely, the economic benefits in terms of reduced policing costs, enhanced social cohesion and reduced burdens on local health services that arise where homes are required to meet minimum standards for domestic security.

It is our understanding that these costs to the public purse will significantly outweigh the direct savings achieved by housebuilders who do not have to build to Secured by Design (SBD) standards.

The impact assessment appears to take no account of the learning rates that would occur if SBD were adopted as nationally recognised standard, and key elements incorporated into the Building Regulations (which can be done as the regulations permit the making of regulations for the purpose of security).

Q40 Do you agree a national water efficiency standard for all new homes should continue to be set out in the Building Regulations?

CIBSE Response

Yes. It is appropriate for UK national water use minimum standards to be applied through building regulations.

Q41 Do you agree that standards should be set in terms of both the whole house and fittings based approaches

CIBSE Response

Yes. Both whole house and fittings options should be acceptable. The fittings approach should ensure that it does not compromise the overall outcome targeted by the whole house calculation method.

Q42 Do you agree that the national minimum standard set in the Building Regulations should remain at the current Part G level? (see also Question 43)

CIBSE Response

Yes, this should have the effect of simplifying the process.

Q43 Do you agree that there should be an additional local standard set at the proposed level?

CIBSE Response

Yes. A higher level of efficiency should be an option where there is evidence that a more stringent level can be technically justified for a particular geographical region.

Q44 Do you agree that no different or higher water efficiency standards should be able to be required?

CIBSE Response

Yes. A baseline national standard with the option of a higher standard, and no further options, is the simplest way forward. It should be sufficient for a region to have a single higher standard, say 105 l/person per day, rather than a proliferation of further levels. It is assumed that the national baseline standard and the higher standard will be reviewed as part of regular national reviews of building regulations.

Q45 Would you prefer a single, tighter national baseline rather than the proposed national limit plus local variation?

CIBSE Response

No, for the reasons given in Q43 and Q44 response.

Q46 Do you agree that local water efficiency standards should only be required to meet a clear need, following consultation as set out above and where it is part of a wider approach consistent with the local water undertaker's water resources management plan?

CIBSE Response

Yes, to encourage proper evidence based decision making.

Q47 Should there be any additional further restrictions/conditions?

CIBSE Response

Yes, an important condition is that the standards should be reviewed and the success monitored to ensure that the standards are adequately understood and implemented. The review of the water efficiency standards should align with recommendations and analysis published by national environmental organisations such as the Environment Agency.

Q51 The Government considers the right approach is that carbon and energy targets are only set in national building regulations and that no interim standard is needed. Do you agree?

CIBSE Response:

Yes, a further interim standard for most developments will add complexity with no time for successful implementation. There is a case however, that interim standards may be appropriate for large developments in England and Wales, where economies of scale mean that more advanced approaches may be feasible and viable, such as developments covered by the London Plan. A large development could be defined as 150 units, or more, which is currently the size of residential development referable to the Mayor of London.

Equally, given that the 2013 changes are really now the 2014 changes, and, with transitionals, will in many cases only be effective in 2015, there is little to be gained from interim requirements.

This all assumes that the 2016 changes to Part L will go ahead. If, as some have started to argue, they are postponed to 2019, then an interim energy level would be a much more reasonable proposition, and possibly a necessity to maintain the required momentum towards “nearly zero energy” or “zero carbon” homes.

Q52 Are respondents content with the proposal in relation to each energy element of the Code for Sustainable Homes?

If not, what are the reasons for wanting to retain elements? If you think some of these elements should be retained should they be incorporated within Building Regulations or set out as a nationally described standard.

CIBSE response:

CIBSE acknowledges that the code was originally developed as a means to set out a pathway to the delivery of zero carbon homes, and was intended to have a short life in that role. We agree that several aspects are now incorporated into Part L of the Building Regulations.

With respect to individual Code elements there are a number of energy elements that warrant retaining and should be incorporated within building regulations or national standards, if Government support of the Code is withdrawn. The elements listed below should not be left to market forces, as they serve a useful purpose in driving efficiency or better living conditions in the home and there is insufficient evidence at this stage that these elements, if removed, will be sufficiently implemented:

On specific elements, we have the following comments:

ENE 3 – Energy Display devices - There remain market challenges for this technology, including specification standards. There is a lack of understanding of the equipment by households, and this should be addressed. In addition, currently there is no common proposal for the integration of smart meters with domestic mechanical or electrical services controls systems, which needs further development and support. Whilst these may not all be addressed by Building Regulations, and the smart meter roll-out will deliver these across the majority of homes, we believe that it is important to realise that these challenges remain.

ENE 4 – Drying Space - This serves a useful purpose in encouraging the controlled mitigation of moisture by natural ventilation or mechanical means from clothes drying, without the use of electric tumble driers. Avoidance of condensation and controlling the risks of mould growth arising from poorly ventilated spaces is an important well-being issue in homes. This issue could be considered in the requirements Part F and Part L and their Approved Documents in future, with respect to prevention of condensation and the impact on household energy consumption if tumble dryers are not used. But we do not think it should just be dropped completely.

ENE 6 - External Lighting – This standard needs to be considered for inclusion as the industry could resort to less efficient halogen lighting if not encouraged to use low energy lamps. Currently external lighting is only mentioned in Approved Document L1A in the definition of fixed building services. The industry has improved internal lighting efficiency, driven by Part L requirements, but external lighting efficiency also needs to be improved. It is not appropriate to remove this standard, it should be adopted with Part L.

It is also important to recognise that the Code for Sustainable Homes is more than a way of setting standards of design and construction; it provides benefits in quality control and assurance arising from the post construction review and independence of the assessor.

It should be acknowledged therefore, that the Code currently serves a useful purpose in providing a requirement for a post construction review from an assessor that has passed a nationally recognised training course and examination. Withdrawal of the Code should not compromise this quality assurance, but there is a risk of installations not being appropriately inspected as a result of withdrawal of the Code. There is a risk that performance gaps may arise because the building control officer or constructor does not have sufficient training or qualifications to provide the appropriate level of assurance.

This issue is already being considered in the ongoing work of the Zero Carbon Hub.

Q56 What are your views on the future of the Planning and Energy Act 2008 (“Merton’s Rule” type planning policies) in relation to the preferred Building Regulations only approach to energy standards?

CIBSE Response

The original Merton Rule along with other sustainability criteria was instrumental in driving innovation in on site low carbon energy provision. It also led the way for the wider London Plan, which incorporates requirements for district energy provision. It is also important to recognise that through local planning policies, such as the Merton Rule, the construction industry has made significant advances in the past decade in the understanding and application of energy efficient design and the analysis and integration of low or zero carbon technologies.

However, it has also created perverse outcomes, with some district solutions and other sustainability measures installed to satisfy planning requirements, but never effectively commissioned or operated. The concern in the industry is that the Planning and Energy Act 2008 has distorted building energy strategies and led to inappropriate emphasis on renewable generation to the detriment of more cost effective solutions.

In the housing sector, there is a potential conflict between the Act and the proposed introduction of Allowable Solutions (although the institution has questioned the compatibility of aspects of the Allowable Solutions policy with the EPBD requirements relating to nearly zero energy buildings).

The broader strategic concern is the need to invest in energy generating capacity, to adapt our built environment to the likely impacts of a changing climate, and the need to maintain resilience and security of supply. Meeting these challenges may lead to local authorities wishing to adopt policies that require district energy generation. And this aspect goes well beyond the scope of the domestic housing development market covered by this review into the wider built environment.

Under these circumstances developers will need to work with local authorities to identify realistic opportunities where development can draw energy supply from decentralised renewable or low carbon energy supply systems, without compromising fabric efficiency or the performance of fixed building services. Energy efficiency is always preferable to wasting energy, however low carbon or renewable the wasted energy may be.

In principle a local authority should be able to specify local requirements relating to energy efficiency and energy supply, where there is a sound basis and demonstration viability. Part of the justification may be that it serves to encourage and enable certain approaches to carbon reduction that would otherwise not happen.

It is important that the local authority demonstrate such policies are viable and technically justified, and that they are subject to local consultation and agreement. A good example would be a proposed development in a region with significant wind generation capacity, thus enabling increased use of renewable energy generation in that locality; or an urban area with an existing or emerging community heating network, where connectivity to the network, subject to viability assessment, could have a positive outcome in encouraging better utilisation and efficiency of the network. However, the clear requirement is for the local authority to demonstrate that the requirements are technically viable and meet a legitimate local business need. It is important that local policies are supported by appropriate guidance and review, to ensure that they remain viable and appropriate.

Given the need to ensure that local requirements are technically viable, there is a need to review the Energy and Planning Act 2008, and to consider whether there is a need for the Act or whether local requirements can be effectively set through other mechanisms. Again, it is appropriate to ensure that technical requirements are set and overseen by those with the necessary technical competence.

Q57 Government is interested in understanding the extent to which daylighting in new homes is a problem, and the appetite for a daylighting design standard to be available to designers and local authorities.

a) Do you believe that new homes are not achieving a sufficient level of daylighting in habitable rooms? If so what evidence do you have that this is the case (please submit evidence as part of your consultation response)?

b) Do you think that it is desirable to consider having a national daylighting standard for use in the design of new homes?

CIBSE Response

- a) **Yes**, with input from RIBA and organisation who currently have evidence based data on current challenges for daylighting in the social housing sector.
- b) **Yes**, a requirement to consider daylighting will encourage the use of natural lighting and provide wellbeing benefits. It should be acknowledged that insufficient access to daylight in new homes could result in increased use of electric lighting and/or poor wellbeing for the occupants.

Q58 Do you agree that a review of simple percentage based methodologies should be undertaken to help determine if such an approach is fit for purpose?

If you have any relevant research or evidence please submit this as part of your consultation response.

CIBSE Response

Yes, a review of simple percentage based methodologies should be undertaken to ensure they are still fit for purpose. In addition, it may be appropriate to consider simple calculation tools, as there has been significant advancements in user-friendly software tools since the original methodologies were established. We refer to research and guidance from architectural and social housing professions on experience of assessing appropriate daylight factors.

Whilst reviewing daylight assessment methodologies it is also important to consider overheating risks in residences, as there is growing evidence that as new homes become better insulated, driven by improvements in Part L, the risk of overheating is increasing, especially in the summer. There are indications that the urban heat island effect and internal heat loads are also increasing and affecting overheating conditions in new homes. When these factors are combined with solar heat gains through south facing windows the overheating risk can be further exacerbated. Research published by NHBC Foundation has summarised the increasing prevalence of overheating in residences. There is a concern is that if overheating is ignored as part of daylight analysis the domestic sector energy consumption could increase due to households purchasing and retrofitting inefficient mobile air conditioning systems.

This is why a review of the daylight assessment methodologies should be cognisant of overheating risks arising from inappropriate glazing strategies. We would recommend that the overheating risk assessment in Part L should also be reviewed to ensure that is fit-for purpose.

Q59 Do you agree that sunlighting should sit outside the scope of this review?

CIBSE Response

No, as the amount of direct sunlight is a contributing factor to overheating risk in dwellings. We support the reference in the Housing Standards Review to the importance of the quality of the indoor environment for occupants and prevention of overheating within dwellings.

Further response on overheating is included in the response to Q58

Q60 Do you agree that essential indoor air quality issues should be addressed through ongoing review of Part F (Ventilation) of the Building Regulations?

CIBSE Response

Yes, indoor air quality should be addressed by Part F, combined a review of the overheating risk assessment methodology in Part L (criterion 3 of the Approved Document). Recent research has indicated poor compliance monitoring of current Part F by building control authorities, and issues of poor design and implementation by industry, as acknowledged by publications from the NHBC Foundation.

Q61 Do you agree that materials standards are best left to the market to lead on

CIBSE Response

No, because the lack of standardisation or regulation of certain materials, if left to the market, could lead to detrimental indoor air quality conditions if used in high concentrations.

It is known that the quality of the indoor environment is linked to the concentration of substances used in construction and furnishings. For example, emissions of volatile organic compounds (VOCs) found in certain furnishings, if not controlled, can lead to poor indoor air quality conditions.

Q62 Which of the above options do you prefer (1, 2, or the hybrid approach)? Please provide reasons for your answer.

CIBSE Response

The hybrid approach is preferred. It would ultimately result in one place for all standards and regulations, which would, in the long term, simplify the design and construction process, with a practical implementation route along the way.

Q63 Do you think that moving to a nationally consistent set of housing standards will deliver supply chain efficiencies to home builders?

If yes, can you provide estimates and evidence of the level of efficiency that could be achieved?

CIBSE Response

Yes, however the importance of providing comprehensive guidance and building capacity for the successful implementation of future standards, alongside their development, cannot be underestimated.

Work done by the Zero Carbon Hub, focusing on the performance gap, has shown that there are skills and capacity issues arising from lack of knowledge, competency or lack of guidance at all stages of the planning, design and construction process. The skills and competency gaps must be addressed to ensure that future standards are applied successfully.

Currently, best practice guidance is not always readily available, which can hinder its adoption. Guidance is more likely to be adopted if it is readily and widely available to the construction industry. CIBSE has recently made great steps to make its knowledge more widely available through the CIBSE Knowledge Portal. Additionally, concise simplified British Standards may assist the industry with adherence where referenced in the Building Regulations.