

UKGBC Response to MHCLG Consultation on the Future Homes Standard

February 2020

Introduction

The UK Green Building Council (UKGBC) is an industry network with a mission to radically improve the sustainability of the built environment, by transforming the way it is planned, designed, constructed, maintained and operated. As a charity with over 400 member organisations spanning the entire sector, we represent the voice of the industry's current and future leaders who are striving for transformational change.

Executive Summary

To put the UK on course to meet both domestic and international climate change commitments, all buildings must be net zero carbon in operation before 2050, with new buildings meeting this standard by 2030. This requires action in all parts of the UK. Following the current consultation, MHCLG should therefore move quickly to:

1. Set out a trajectory for tightening building regulations to ensure all new buildings in 2030 operate at net zero carbon for regulated and unregulated energy
 - 2020: Adopt at least the proposed 31% improvement in Part L; retain a fabric energy efficiency standard (FEES) as a metric of compliance in order to minimise energy demand and ensure an improvement in fabric performance compared with current levels. In the absence of FEES, the 31% improvement could be delivered through the installation of low or zero carbon technologies on sub-optimal fabric, leading to avoidable grid demand
 - 2025: Tighten fabric energy efficiency standards in line with the Committee on Climate Change recommendations; introduce energy use intensity targets covering regulated and unregulated energy
2. Transition towards in-use energy performance as the basis of compliance
 - 2020: phase in requirements for the measurement and disclosure of in-use performance; introduce options for alternative compliance with Part L based on in-use performance
 - 2025: introduce regulatory requirements to assure performance in-use for regulated energy
3. Set out a timetable for introducing requirements for the assessment of whole life carbon and targets for reductions
 - 2020: phase in requirements for assessment of whole life carbon, starting with larger developments
 - 2025: requirements for all developments to assess and disclose whole life carbon impacts, and phase in targets for reductions starting with larger developments
 - 2030: introduce targets for all developments for reductions in whole life carbon
4. Retain the powers of local authorities to set higher requirements than national standards where practical and demonstrably viable. A forward trajectory for future uplifts to Building Regulations should be published to allow local authorities to set higher energy performance standards in line with future national requirements. This should mean that investment and skills are related directly to future uplifts in national regulations.
5. Introduce more stringent transitional arrangements from 2020 to ensure that homes not commenced within a reasonable period following building notice, initial notice or full plans must comply with the latest Part L. We recommend that this 'reasonable period' should be 3 years to align with the planning cycle.
6. Improve enforcement of and compliance with Building Regulations. The proposed requirement for mandatory photographic evidence is welcome, but does not go far enough. A digital record should be created for every home, containing all relevant evidence from design through construction – along the lines of the 'golden thread'

recommended in the Hackitt Review. In addition, Building Control Bodies must be adequately resourced and upskilled; and fines for non-compliance significantly increased.

7. Consult far sooner than 2024 (as proposed in the consultation) on Future Homes Standard implementation. The market needs as long as possible to innovate and develop expertise and supply chains.

Responses to individual Consultation Questions:

(N.B. We have responded only to those questions that fall within our organisational remit)

Question 1: Do you agree with our expectation that a home built to the Future Homes Standard should produce 75-80% less CO₂ emissions than one built to current requirements? If no, please explain your reasoning and provide evidence to support this.

a. Yes (but with a caveat – see below)

b. No – 75-80% is too high a reduction in CO₂

c. No – 75-80% is too low a reduction in CO₂

If no, please explain your reasoning and provide evidence to support this.

We broadly agree with the aspiration for 2025 set out in the consultation. However, we strongly disagree with the proposal to remove the Fabric Energy Efficiency Standard (FEES) (see our detailed responses to Questions 3 and 11). The FEES must be retained as a metric of compliance in order to minimise energy demand and ensure a meaningful improvement in fabric performance. In the absence of FEES, the 75-80% improvement could, as the proposals currently stand, be delivered through the installation of a heat pump on fabric that is no better than that required by Part L 2013, leading to totally avoidable demand on the grid and the need for costly retrofit in the future. We concede the possibility that the Government has in mind a plan to use a combination of the primary energy target and householder affordability rating to deliver similar results to those currently delivered by FEES – but the consultation document gives no indication of such an intention, and in any case if very high levels of energy efficiency are indeed the Government's aim, then the simplest and most straightforward way of achieving these is through a dedicated energy efficiency standard.

The rapid decarbonisation of the electricity grid will on its own drive significant reductions in in homes' CO₂ emissions. However, this should not lead us to be complacent. Grid decarbonisation has to be accompanied by meaningful fabric improvements and the introduction of targets for reducing both regulated and unregulated energy in-use. Specifically, by 2025 the Government should:

- tighten fabric energy efficiency standards in line with the Committee on Climate Change recommendations limiting heat demand to 15-20kwh/m²/year;
- introduce energy use intensity targets covering regulated and unregulated energy;
- make in-use performance the basis for compliance with Part L in relation to regulated energy;
- introduce requirements for all developments to assess and disclose whole life carbon impacts, and phase in targets for reductions, starting with larger developments.

Question 2: We think that heat pumps and heat networks should typically be used to deliver the low carbon heating requirement of the Future Homes Standard. What are your views on this and in what circumstances should other low carbon technologies, such as direct electric heating, be used?

We support the move away from fossil fuels to electricity-based systems, such as heat pumps. However, as per our response to Question 1, it is vital that the use of such technologies be underpinned by a robust FEES – otherwise demand on the grid and household energy bills will be unnecessarily high.

In addition, we are concerned that the heat pump market needs to develop by several orders of magnitude in order to meet anticipated demand. There will need to be a marked increase in the number and competencies of installers too.

Heat networks will only be appropriate in some locations, e.g. high density areas, and appropriateness must be established on a case-by-case basis. Consideration must also be given to the energy sources supplying networks, ensuring that plans are in place to decarbonise the networks as soon as practicable.

Direct electric heating should only be used where homes have extremely high fabric energy efficiency – otherwise the implications for fuel costs will be punitive.

Question 3: Do you agree that the fabric package for Option 1 (Future Homes Fabric) set out in Chapter 3 and Table 4 of the impact assessment provides a reasonable basis for the fabric performance of the Future Homes Standard?

a. Yes

b. No – the fabric standard is too demanding

c. No – the fabric standard is not demanding enough

As per our response to Question 1, we strongly oppose the removal of the FEES. The proposed minimum elemental fabric standards are no substitute and are far too low to drive good fabric performance overall. It is interesting in this context to note that, with the exception of the proposed minima for party walls and air permeability, all the elemental standards are lower than those proposed by the Welsh Government in their Part L consultation¹. In particular our members assure us that the external wall minimum can be pushed down from the proposed 0.26W/m².K to 0.15 (the Welsh proposal is for 0.18) - and that the air permeability minimum (8m³/m².K at 50Pa) is well out of step with what developers are already delivering (5 for naturally ventilated buildings and 3 with mechanical ventilation).

Without the FEES, it is clear that in some cases a building that would have failed Building Regulations 2013 (by complying with elemental minima but failing the overall FEES target) could meet the carbon target for 2020 Building Regulations through the installation of low carbon heating technologies alone. This, frankly, would be an insane outcome, which would be out of step with the UK's energy goals and overarching 2050 net zero target.

Question 4: When, if at all, should the government commence the amendment to the Planning and Energy Act 2008 to restrict local planning authorities from setting higher energy efficiency standards for dwellings?

a. In 2020 alongside the introduction of any option to uplift to the energy efficiency standards of Part L b. In 2020 but only in the event of the introduction of a 31% uplift (option 2) to the energy efficiency standards of Part L

c. In 2025 alongside the introduction of the Future Homes Standard

d. The government should not commence the amendment to the Planning and Energy Act

Please explain your reasoning.

¹ <https://gov.wales/sites/default/files/consultations/2019-12/consultation-document-building-regulations-part-l-review.pdf>

After the 2016 Zero Carbon Homes policy was scrapped, a number of local authorities stepped up and used their powers under the Planning & Energy Act 2008 to set higher energy standards than those required by Part L. We have no doubt that this in turn helped demonstrate to Government the viability of mandating higher standards nationwide (as proposed in the current consultation). It is also worth noting that, had local authorities not felt such uncertainty about the status and extent of their powers (in the wake of the March 2015 Written Ministerial Statement and the planned amendments to the Planning & Energy Act), the number of councils specifying energy performance standards beyond Part L would almost certainly have been considerably higher.

More recently, 65% of UK local authorities have responded to the climate crisis by declaring climate emergencies – and they need to have the ability to match this leadership with appropriate policies in their local plans. By setting higher standards, local authorities are able to drive innovation and the development of skills and supply chain solutions, which in turn helps bring costs down and, crucially, achieves earlier progress towards meeting our climate targets.

It can of course be argued that the simplest solution is a consistent and ambitious standard that raises the bar for everyone, everywhere. However, that is not what the current consultation gives us – it contains almost no detail about the Future Homes Standard (beyond the aspiration for a 75-80% carbon reduction) – and crucially there is no mention of moving towards regulating in-use performance, currently unregulated energy or embodied carbon. Some local authorities have already pledged to require net zero carbon in operation for new buildings, for example Greater Manchester in 2028. Removing their power to do so would stifle innovation and fly in the face of our wider climate commitments.

At the same time, we do understand developers' concerns about the possibility of a patchwork of differing standards across the country. At UKGBC we have therefore seen it as our role to encourage local authority ambition alongside consistency where possible. That is why we are now recommending that MHCLG act swiftly to publish a forward trajectory for future Part L uplifts, which would allow local authorities to set higher energy performance standards in line with future national requirements. This could fulfil a similar function to the old Code for Sustainable Homes, which clearly set out the future direction of national policy. It would also mean that investment and skills would be directly related to future uplifts in national regulations.

Question 5: Do you agree with the proposed timings presented in Figure 2.1 showing the Roadmap to the Future Homes Standard?

a. Yes

b. No – the timings are too ambitious

c. No – the timings are not ambitious enough

If no, please explain your reasoning.

While we agree with the 2025 implementation date, we cannot understand why it is proposed to delay until 2024 any further detailed consultation. What possible reason can there be for delaying the establishment of the FHS industry taskforce till halfway through 2021? The market needs as long as possible to innovate and develop expertise and supply chains. The industry taskforce and associated technical working groups should therefore be established as soon as possible. This is all the more important because of the huge delay since Part L was last updated in 2013. This is the longest gap between Part L uplifts since Building Regulations in their current form were introduced in 1984.

Question 6: What level of uplift to the energy efficiency standards in the Building Regulations should be introduced in 2020?

a. No change

b. Option 1 – 20% CO2 reduction

c. Option 2 – 31% CO2 reduction (the government’s preferred option)

d. Other

Please explain your reasoning.

We believe that MHCLG should adopt in 2020 *at least* the proposed 31% improvement in Part L. However, as already indicated in our responses to Questions 1 and 3, we strongly oppose the removal of the Fabric Energy Efficiency Standard, which could lead to homes that would have failed Part L 2013 due to poor fabric passing the carbon target under Part L 2020. The FEES must be retained as a metric of compliance in order to minimise energy demand and ensure an improvement in fabric performance compared with current levels.

In addition, in 2020 MHCLG should:

- phase in requirements for the assessment of whole life carbon, starting with larger developments;
- phase in requirements for the measurement and disclosure of in-use performance; and introduce an optional route for compliance with Part L based on in-use performance. This would allow industry leaders to pioneer the approach, building capacity and skills and help Government test and evaluate the requirements for 2025, when operational performance should become the main compliance route.

Question 7: Do you agree with using primary energy as the principal performance metric?

a. Yes – primary energy should be the principal performance metric (but with a caveat – see below)

b. No – CO2 should remain the principal performance metric

c. No – another measure should be the principal performance metric

Please explain your reasoning and provide evidence to support this.

We understand that the introduction of a primary energy metric is considered necessary for the implementation of the revised Energy Performance of Buildings Directive (EPBD). However, calculation of primary energy requires the multiplication of energy use by a factor, which can mask the actual energy consumption of a building. Normalising the primary energy measurement using the area of the building (to create an energy use intensity figure) would allow for a better understanding of a building’s actual performance and better comparison between buildings. Therefore from 2020 the primary energy metric should be accompanied by a requirement for the calculation and disclosure of an EUI figure. As we move towards 2025 we should transition to using an EUI metric based on metered energy and covering both regulated and unregulated energy.

Question 8: Do you agree with using CO2 as the secondary performance metric?

a. Yes (but with a caveat – see below)

b. No

Please explain your reasoning.

It remains important to understand and measure the carbon performance of the nation’s homes. However, as already mentioned, as the electricity grid decarbonises further, CO₂ intensity will become an increasingly redundant metric for the purposes of Part L. By contrast, minimising energy demand will be absolutely key – hence our proposal that by 2025 at the latest we should have moved to a principal EUI metric such as (metered) kW/m²/year. If this happens, CO₂ could still have a place alongside the other proposed secondary metrics –

principally as an additional guarantee that all remaining domestic energy demand is met through non-fossil fuel technologies.

Question 9: Do you agree with the proposal to set a minimum target to ensure that homes are affordable to run?

a. Yes

b. No

Please explain your reasoning.

It is vital that we guard against excessively high fuel costs and the risk of households falling into fuel poverty. This is particularly important as electricity prices are predicted to continue to rise. However, reintroducing the FEES (as we recommend throughout this response) would be a far more effective way of ensuring that energy demand is minimised, which will in turn go a long way to tackling affordability issues.

Question 10: Should the minimum target used to ensure that homes are affordable to run be a minimum Energy Efficiency Rating?

a. Yes

b. No

If yes, please suggest a minimum Energy Efficiency Rating that should be achieved and provide evidence to support this.

If no, please suggest an alternative metric, explain your reason and provide evidence to support this.

An EPC rating is a poor predictor of energy consumption and therefore energy bills. An adjustment factor would need to be included if this were used. Research by UKGBC member Etude highlights the poor relationship between EPC ratings and the actual energy consumption of a home².

Basing affordability predictions on an EUI value would be a more accurate and helpful metric.

Question 11: Do you agree with the proposed minimum fabric standards set out in Table 3.1? If you do not agree with any one or more of the proposed standards, please explain your reasoning and provide evidence to support this.

No. For our detailed comments, see our response to Question 3. We should not be designing and building homes in 2020 that will need retrofitting with additional insulation in the future. The proposed minimum elemental standards could allow for a worsening in fabric performance compared with the current Part L 2013 FEES.

Question 12: Do you think that the minimum fabric standards should be set in the Building Regulations or in the Approved Document (as is the current case)?

a. In the Building Regulations

b. In the Approved Document

Please explain your reasoning.

² <https://www.cibsejournal.com/technical/completing-the-picture-london-energy-map/>

The Approved Document should continue to contain the means whereby to comply with Building Regulations, as is currently the case.

Question 13: In the context of the proposed move to a primary energy metric and improved minimum fabric standards, do you agree with the proposal to remove the fabric energy efficiency target?

a. Yes

b. No

If no, please explain your reasoning.

For our detailed comments, see our responses to Questions 1, 3 and 11.

Question 17: Do you agree with the proposed changes to minimum building services efficiencies and controls set out in table 3.2?

If you do not agree with any one or more of the proposed changes, please explain your reasoning and provide evidence to support this.

Question 26: Do you agree with the removal of the supplementary guidance from Approved Document L, as outlined in paragraph 3.59 of the consultation document?

a. Yes

b. No

If no, please explain your reasoning.

The guidance that it is proposed to remove is useful guidance on meeting mandatory requirements. Without guidance on these issues there is a risk that poor choices will be made in the design of new homes.

Question 28: Do you agree with incorporating the Compliance Guides into the Approved Documents?

a. Yes

b. No

If no, please explain your reasoning.

We are concerned that useful guidance will be lost.

Question 29: Do you agree that we have adequately covered matters which are currently in the Domestic Building Services Compliance Guide in the new draft Approved Document L for new dwellings?

a. Yes

b. No

If no, please explain which matters are not adequately covered.

We are concerned that useful guidance will be lost.

Question 31: Do you agree with the proposals for restructuring the Approved Document guidance?

a. Yes

b. No

If no, please explain your reasoning.

The current Approved Documents are currently divided into four distinct documents pertaining to different building typologies and ages. Restructuring the documents as proposed could lead to confusion over scope.

Question 34: Do you agree with proposed guidance on providing information about building automation and control systems for new dwellings?

a. Yes

b. No

If no, please explain your reasoning.

Question 43: Do you agree with the proposed approach in the draft Approved Document for determining minimum whole building ventilation rates in the draft Approved Document F?

a. Yes

b. No – the ventilation rate is too high

c. No – the ventilation rate is too low

d. No - I disagree for another reason

If no, please explain your reasoning.

Question 47: Do you agree with the proposal to provide a completed checklist and commissioning sheet to the building owner?

a. Yes

b. No

If no, please explain your reasoning.

Question 48: Do you agree that there should be a limit to the credit given in SAP for energy savings from airtightness for naturally ventilated dwellings?

a. Yes

b. No

If no, please explain your reasoning.

We believe that this question is addressing the issue of airtightness and ventilation from the wrong angle. We should not be discouraging high levels of airtightness just because, without mechanical ventilation, these can lead to poor indoor air quality. Surely the answer is to amend Part F to ensure that above a certain airtightness ($3\text{m}^3/\text{m}^2.\text{h}$ at 50Pa) homes should have mechanical ventilation with heat recovery? If, however, the Government continues to allow natural ventilation, the credit for airtightness should be limited to $5\text{m}^3/\text{m}^2.\text{h}$ for naturally

ventilated dwellings. At higher levels of airtightness you would require mechanical ventilation to gain further credits.

Question 49: Do you agree that the limit should be set at 3m³/m².h?

a. Yes

b. No – it is too low

c. No – it is too high

If no, please explain your reasoning and provide evidence.

See our response to Question 48.

Question 50: Is having a standard level of uncertainty of 0.5 m³/m².h appropriate for all dwellings undergoing an airtightness test?

a. Yes

b. No – a percentage uncertainty would be more appropriate

c. No – I agree with having a standard level of uncertainty, but 0.5 m³/m².h is not an appropriate figure.

d. No – I disagree for another reason

If no, please explain your reasoning.

We believe that a percentage is more representative when the air permeability is low.

Question 51: Currently only a proportion of new dwellings are required to be airtightness tested. Do you agree with the proposal that all new dwellings should be airtightness tested?

a. Yes

b. No

Yes, we very much agree with this proposal which should improve compliance and reduce the performance gap. However, care must be taken to develop a suitable methodology for high rise blocks of flats, where one test might assess the core with all flat doors closed, with a further test assessing the envelope efficiency with the doors open.

If no, please explain your reasoning and provide evidence to support this.

Question 52: Currently, small developments are excluded from the requirement to undergo any airtightness tests. Do you agree with including small developments in this requirement?

a. Yes

b. No

If no, please explain your reasoning and provide evidence to support this.

Question 53: Do you agree that the Pulse test should be introduced into statutory guidance as an alternative airtightness testing method alongside the blower door test?

a. Yes

b. No

If no, please explain your reasoning.

Question 55: Do you agree that we should adopt an independent approved airtightness testing methodology?

a. Yes

b. No

Please explain your reasoning.

Question 56: Do you agree with the content of the CIBSE draft methodology which will be available via the link in the consultation document? Please make any comments here.

Yes.

Question 57: Do you agree with the introduction of guidance for Build Quality in the Approved Document becoming part of the reasonable provision for compliance with the minimum standards of Part L?

a. Yes

b. No

Please explain your reasoning and provide evidence to support this.

Question 58: Do you have any comments on the Build Quality guidance in Annex C?

No.

Question 59: Do you agree with the introduction of the standardised compliance report, the Building Regulations England Part L (BREL) report, as presented in Annex D?

a. Yes

b. No there is no need for a standardised compliance report

c. No – I agree there should be a standardised compliance report but do not agree with the draft in Annex D

If no, please explain your reasoning

Question 60: Do you agree with the introduction of photographic evidence as a requirement for producing the as-built energy assessment for new dwellings?

a. Yes

b. No

If no, please explain your reasoning

The proposed requirement for mandatory photographic evidence is welcome, but does not go far enough. For robust compliance to exist, there must be evidence that the right products have been installed correctly – but that evidence will not always consist of photographs. For example, the problem of a worse-performing product

being substituted for a better one will not be resolved by photographic evidence alone. Similarly, insulation blown into completed wall cavities is unable to be recorded photographically. What is needed is a digital record for every home, containing all relevant evidence from design through construction – along the lines of the ‘golden thread’ recommended in the Hackitt Review.

In addition, Government must ensure that Building Control Bodies (BCBs) are adequately resourced and upskilled. Local authority Building Control Officers (BCOs) are horribly short of resources and time, and there are too few of them to go out on site at critical junctures. In addition, while Building Regulations have become increasingly complex, BCOs do not generally have the time or resources to undertake training. More must also be done to tackle the fact that under the current system there are incentives for building control competitors (i.e. BCBs and Approved Inspectors) to attract business by offering very ‘light touch’ interventions when measuring compliance. Moreover, there are disincentives for BCBs to use enforcement mechanisms for fear of losing long-term business.

A further issue is that enforcement action in the courts is very rarely undertaken. Going through the courts is a drain on time and resources, and local authorities may not have the required expertise to put together a compelling case. Also magistrates’ courts’ fines are frequently minimal (on average just over £5,100), while local authority legal costs are almost never fully recovered. Taking large contractors or developers to court simply does not hurt them financially. It is therefore vital that sanctions and penalties are significantly increased and that local authorities are awarded full costs.

Question 61: Do you agree with the proposal to require the signed standardised compliance report (BREL) and the supporting photographic evidence to be provided to Building Control?

a. Yes

b. No

If no, please explain your reasoning

Question 62: Do you agree with the proposal to provide homeowner with the signed standardised compliance report (BREL) and photographic evidence?

a. Yes

b. No

Please explain your reasoning.

Question 63: Do you agree with the proposal to specify the version of Part L that the home is built to on the EPC?

a. Yes

b. No

Please explain your reasoning.

Question 64: Do you agree Approved Document L should provide a set format for a home user guide in order to inform homeowners how to efficiently operate their dwelling?

a. Yes

b. No

If yes, please provide your views on what should be included in the guide.

If no, please explain your reasoning

Question 65: Do you agree that the transitional arrangements for the energy efficiency changes in 2020 should not apply to individual buildings where work has not started within a reasonable period – resulting in those buildings having to be built to the new energy efficiency standard?

a. Yes – where building work has commenced on an individual building within a reasonable period, the transitional arrangements should apply to that building, but not to the buildings on which building work has not commenced

b. No – the transitional arrangements should continue to apply to all building work on a development, irrespective of whether or not building work has commenced on individual buildings

If yes, please suggest a suitable length of time for the reasonable period in which building work should have started.

If no, please explain your reasoning and provide evidence to support this.

We wholeheartedly support this proposal, as we have long been concerned by the current situation whereby later buildings built on a site can be built to previous energy efficiency standards. Against the backdrop of the climate crisis and the UK's net zero target, it is completely wrong that many buildings are currently coming to market built to the standards required by the 2010, 2006 or even 2003 Building Regulations.

As regards the suitable length of time for the 'reasonable period', we believe that this should be 3 years in order to align with the planning cycle.

Question 66: Do you foresee any issues that may arise from the proposed 2020 transitional arrangements outlined in this consultation?

a. Yes

b. No

Please explain your reasoning and provide evidence to support this.

Question 67: What is your view on the possible transitional arrangements regarding changes to be made in 2025?

We fully agree that the Future Homes Standard should apply to as many new homes as possible from 2025. We would suggest that transitional arrangements should only apply to buildings at a significantly developed stage (e.g. plastering) and that the 'reasonable period' should be reduced to, say, 6 months.

**UKGBC
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