ACAN - Building Regulations Part L and F Consultation

Chapter 2 The Future Homes Standard

Q1

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?

a. Yes

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 believe 75-80% CO2 reduction is too low to provide the trajectory to meeting the UK Government's legally binding target for net zero greenhouse gases by 2050. It should be noted that many local authorities have also announced more onerous targets of zero carbon emissions by 2030. To meet these requirements without extensive off-setting all new buildings will need to operate at annual net zero carbon emissions by 2030, which means that by 2025 all new buildings must be designed to net zero.

To drive down carbon emissions to zero we need to adopt a Whole Life Carbon approach to design and Part L must be the vehicle to drive this. Whole Life Carbon includes the embodied carbon taken to construct, maintain and deconstruct the building plus the operational energy taken to run it. There is often no perfect solution, but an optimum balance. Both loads need to be measured during design, therefore Part L needs to recognise the importance of this.

Further to this we believe the energy a dwelling is assessed under should include regulated and expected unregulated energy use. This will give a much more predictable figure for the actual running cost of the dwelling that can be referred to when measuring energy in-use.

Part L must require the measurement of energy in-use in order to eliminate the performance gap and ensure occupants are operating their homes at maximum efficiency, with minimal emissions.

We need a clear plan as to how we will measure compliance in a way that informs good design, by which we mean the integration of built fabric and systems. The current and proposed Part L does not allow this. We believe the Approved Document Part L needs to become the legislative driver, in order to ensure net zero carbon is achieved.

The Future Homes Standard should be based on a less abstract and more empirical way of measuring performance. The comparison of a design to a 'notional building' should be removed. The Future Homes Standard must require:

- Minimal energy use of new homes, with emphasis on a fabric-first approach.

- Reporting of Whole Life Carbon, including embodied carbon and operational energy.

- An at the meter energy metric such as kWh/m2/yr.

- The compliance of each dwelling with a target expected kWh/m2/yr.

- The reporting of both regulated and unregulated loads.

- The production and reporting of a DEC, at least 12 months after completion, as well as an EPC to ensure optimum operating efficiency.

Furthermore, the calculation of the operational energy of each dwelling should not rely on carbon factors to prove a reduction in carbon emissions. There is a risk in the current drafting that the carbon factors proposed disguise the poor performance of the dwelling itself by relying too heavily on the decarbonisation of the grid for performance improvements. If this methodology is carried out, we believe dwellings built under this standard will require retro-fitting before 2050.

Q2

We think 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?

The emphasis of the documentation should be the achievement of minimum energy use that each dwelling must meet for each specific project. The best way of doing this is to emphasise fabric performance.

Emphasising that a design must consider both embodied carbon and operational carbon through a Whole Life Carbon analysis is the best way of reducing emissions overall and ascertaining whether heat pumps or networks are appropriate or optimum for a specific development. The optimum solution will vary dependent on context.

It is recognised that heat pumps and heat networks contribute to low carbon emissions. However, a preferable, and more robust, approach is to not influence the use of specific technologies. but emphasise the:

- Elimination of fossil fuels, including gas

- Requirement for minimal costs for occupants in-use

There are a number of factors that need to be taken into account when determining if a heat network is the best solution. Ambient temperature networks with building level heat pumps reduce losses and can facilitate energy sharing. These types of networks could be used to deliver the low carbon heating requirement of the Future Homes Standard. However, losses must always be taken into account when deciding if a networked approach is appropriate for a specific project. It should be noted that POE findings that suggest developments that utilise heat networks need to communicate better with residents about how the energy is distributed, used and billed.

We do not believe direct electric heating should be listed as a low carbon technology as it risks mis-use. There could be a place for this where heating demand is very low due to enhanced fabric performance, but generally electric heating delivers 2-3 times less heat than a heat pump for the same amount of carbon emissions and is more expensive for residents. Heat delivered by direct electric is only low carbon if the grid is low carbon or provided by renewables.

The documentation should not be drafted in such a way that it inhibits further innovation during the next few years.

Q3

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

If no, please explain your reasoning.

The fabric standard is not demanding enough. New buildings are already able to surpass the performance required. We need to be challenging the industry harder in order to meet our zero carbon emissions targets. The primary ambition of Part L must be to reduce overall energy use of dwellings and the best way of doing this is through increasing the fabric performance.

We are very concerned at the omission of the fabric energy efficiency standard (FEES). Using this standard, new homes could actually use more energy than under Building Regulations 2013 due to the calculation methodology proposed. This will not provide the uplift required to energy efficiency standards as a stepping stone to a zero carbon economy.

The Future Homes Standard must set the performance standard by retaining the FEES and increasing the standard to reduce overall energy use.

We believe the standard, as drafted, will require new dwellings built under this standard to be retro-fitted in the future, which is not acceptable.

At a detailed level, the consultation document mentions taping rigid insulation to improve air tightness, but Part B for buildings over 18m prohibits the use of these products. Part L and Part B need to be aligned. For example, a fully filled mineral wool solution may be able to conform to both requirements.

Q4

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 standard for dwellings?

a. In 2020 alongside the introduction of any option to uplift 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.

We do not believe there should be amendments to the Planning and Energy Act.

Sixty-five percent of local authorities across the UK have declared a climate emergency and set their own enhanced planning targets beyond the legally binding UK targets. It is imperative that local authorities are not stripped of their powers to go beyond the minimums set by Building Regulations. Local authorities are much better placed to assess local need and the viability of their area. It is counterintuitive and likely to provide greater market uncertainty to roll back local targets now when we need to increase them and align them with our national, legally binding, zero carbon trajectory.

Our ability to slow climate change depends on an ambitious Local Authority response. Government should therefore not be seeking to take this away but instead be supporting them.

London is an example of where setting local targets beyond that of Building Regulations has been proven viable and successful. It should be noted that the London Plan already requires a 35% reduction in CO2 with a 10% reduction in CO2 through fabric alone. The current Future Homes Standard is a significant step backwards from this. Even a 31% reduction in CO2 would still be below London's current target.

Q5

Do you agree with the proposed timings presented in Figure 2.1 (displayed in Chapter 2) 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.

It is imperative that the Future home standard consultation is carried out as soon as possible and much earlier than the proposed date of 2024. This will allow the construction industry to prepare in advance of the dramatic changes necessary to meet the climate targets set by the government.

The proposed research period from 2021 to 2023 is also unnecessarily long given the significant amount of quantifiable data already available. Fabric First approaches such as Passivhaus have proven to deliver excellent results with particularly low energy energy consumption in a cost effective way. It is now estimated that a Passivhaus social residential project can be achieved with an 8% cost uplift compared to non passive house scheme whilst delivering extremely comfortable and healthy homes to occupants in the long term. (Source the Passivhaus Trust).

Given our response to Question 1 (in which we recommend that the measurement standards that the industry is working to should be based on in-use metrics with units such as kWh/m²/yr), it is important that the construction industry is given as much time as possible to adjust to this new approach as it is a major departure from the current methodology that is used.

Chapter 3 Part L Standards for New Homes in 2020

Q6

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.

The proposed options are not ambitious enough to fight climate change in a meaningful way.

Using a fabric first approach should be the primary step in reducing carbon emissions within construction. Technology should then be used to further reduce any remaining emissions. The suggested 20% and 31% reductions do not go far enough to reduce carbon emission and

improve fabric, comfort and wellbeing standards (refer to Q4 answer). Homes need to make, as a minimum, a 50% reduction in carbon emissions. 60% would be an ideal target.

The Fabric Energy Efficiency Standard (FEES) metric set out in the 2013 Part L Document provides a valuable minimum standard. This standard needs to be retained and improved and not removed from guidance as suggested (i.e not just used for the notional building) to ensure that the optimum building envelope is maintained - minimising demand on heating and cooling systems used within the building irrespective of the efficiency of the heating and cooling systems used. An approach based on operational performance should be based on absolute energy consumption expressed in $kWh/m^2/yr$.

The proposed approach based on updated carbon factors will also mask poor fabric efficiency by relying too heavily on a decarbonised grid and energy efficient mechanical heating/ cooling systems to create an 'energy efficient building'. Buildings designed in this way have the potential to fail current Part L 2013 FEES and in the long term will require retrofitting (at considerable expense to the owners and the environment) to meet the 2050 net zero carbon target. Further a building designed with poor building fabric has the potential to create air quality and comfort issues with an impact on health and well being for occupants.

The aim of Part L, Part F and the Future Home Standard should be to minimise all energy usage by optimising building fabric and not relying on a decarbonised grid and energy efficient systems to mask a substandard building fabric.

Q7

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

a. Yes – primary energy should be the principal performance metric

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.

The principal performance metric used must take into consideration the total energy used within the building (both regulated and unregulated) which can be established through dwellings energy meter(s) and should be produced at a design stage and measured during use via mechanisms such as the EPC and DEC.

Whilst there is an EU directive to use a primary energy metric the publication of metrics such as Energy Use Intensity (EUI) in KWh/m²/yr should be used to connect early design stage predictions with in use performance that consumers experience.

The Proposed use of carbon and primary energy metrics do not give consumers an understanding of the actual energy that their building will use. As a result this will not encourage an improvement to individual building performance as buildings will be heavily dependent on the wider systems into which they are integrated. It is essential for both consumers and meeting climate targets that a metric is used that accurately reflects the total energy usage of a building instead of relying on indirect indicators that are not linked to individual building performance.

Q8

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

a. Yes

b. No

Please explain your reasoning.

We do not agree with the use of CO_2 as a secondary performance metric. In the context of an increasingly decarbonised grid and buildings relying on electric heating and cooling systems referring to CO_2 becomes irrelevant and will disguise the actual energy performance of the buildings in question.

The primary objective for Part L should be to minimise the energy demand from new homes as a means to minimise the demand on the National Grid ensuring that renewable energy is not unnecessarily wasted. The use of renewable energy still has an embodied energy associated with its use (in both the establishment of the infrastructure and also in its maintenance) this also needs to be minimised by reducing demand on the National Grid.

In the effort to reduce energy consumption within buildings only a metered energy use intensity metric should be used such as KWh/m^2/yr.

Q9

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.

Yes as long as the target used is sufficient and that the Energy Efficiency Rating is based on a suitable metric. An energy use intensity metric such as a (metered) kWh/m^2/yr is the best way to prove affordability as it can be linked to local energy costs.

It is not clear how the current proposal and calculation method (SAP) will inform the affordability of homes. This is particularly relevant given the current performance gap between the design and operational performance of buildings (which are partly based on SAP methodology). We believe the best way to ensure homes are affordable to run is to retain and improve the existing FEES, improve air permeability targets (equal or less than 3m3/h.m2 @50Pa) paired with efficient ventilation/heating/cooling systems . By ensuring homes have a high fabric efficiency running costs and dependence on energy suppliers will be minimised.

Q10

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 not, please suggest an alternative metric, explain your reasoning and provide evidence to support this.

An EPC rating is a poor predictor of energy consumption and therefore energy bills and in fact contributes to the issue of performance gap by reporting inaccurate data on building performance. It is not reasonable to assume that a good EPC rating results in low energy bills. An important adjustment factor would need to be included if this was used - to protect occupants from unexpected high energy bills.

A study conducted by consultancy Etude illustrated with the graph below shows that the best performing homes with an EPC rating of D or E can outperform a B-rated home. This could be

linked to the fact that until changes were made to Part L, some homes were able to gain credits merely by installing renewable energy in poorly insulated homes.

This can also be related to occupants' own behaviour and needs which is difficult to predict. This is why we believe the best way to ensure low energy bills is to adopt a fabric efficiency first approach to building design in combination with efficient ventilation/heating/cooling systems (and built form/orientation). Such homes are said to be designed to 'passivhaus standards' and as a result of these measures they have reliably demonstrated exceptionally lower energy levels to be heated/cooled. Thus occupants are protected by the same token from any hike in energy bills. For this reason we advocate the use of metered kWh/m²/yr as indicator of energy use intensity.

Figure 1: Illustration of disconnect between EPC bands and actual energy consumption in the domestic sector: Energy intensity of 410 homes across a local authority in England, by EPC rating. Each bar represents a single dwelling's energy intensity over the course of a year (credit: Etude)

Q11

Do you agree with the minimum fabric standards proposed in table 3.1?

a. **Yes**
b. **No – should be more insulating**
c. **No – should be less insulating**

Table 3.1 – Minimum standards for fabric performance

External walls	**0.26 W/m2.K**
Party walls	**0.20 W/m2.K**
Floor	**0.18 W/m2.K**
Roof	**0.16 W/m2.K**
Windows, roof windows, glazed roof lights, curtain walling, and pedestrian doors	**1.6 W/m2.K**
Roof-lights	**2.2 W/m2.K**
Air permeability	**8m3/m2.K at 50Pa**

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

These options do not go far enough on fabric efficiency, they are only marginally better than the current minimums. Combined with the proposal to scrap the FEES under the new regulations new homes could be less insulated in 2020 than under Building Regulations 2013 (see also ACAN's answer to Q6).

ACAN strongly believes in a fabric first approach with minimum standard values set to ensure that new homes built in 2020 have the lowest possible energy requirement, no matter what technology is used to heat them. We believe adopting a fabric first approach will allow a more robust path towards meeting the UK climate targets. By starting off with a well performing thermal fabric the gap to be made up by the systems will be smaller and less costly.

We propose the following as the minimum standard values:

External walls	*0.15 W/m2.K*
Party walls	*0.0 W/m2.K*
Floor	*0.10 W/m2.K*
Roof	*0.10 W/m2.K*
Windows, roof windows, glazed roof lights, curtain walling, and pedestrian doors	*1.2- 0.8 W/m2.K*
Air permeability	*<<3m3/m2.h at 50Pa*

Note that MVHR must be mandatory at these levels of airtightness to protect from poor indoor air quality.

Q12

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.

The minimum fabric standards should be in the Approved Documents as this is where people are most likely to look to find this information. But the requirement not to exceed these standards should be mandatory, rather than guidance. The standards are too low as documented in our response to Q11

Q13

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.

The Fabric Energy Efficiency Standard (FEES) must not be removed. We are very concerned about the proposal to omit this. It must be retained, with minimum fabric U-values and airtightness further improved compared to 2013.

If FEES were removed from the Future Homes Standard, and other provisions such as carbon factors were retained, there is a grave risk that technology could be used to mask a poor building fabric. The U-values set out in the minimum standards for fabric performance are not onerous enough to justify the removal of FEES. As it stands, homes could be built with less insulation in 2020 than Part L 2013, increasing overall energy use, when we need to be neutralising it to zero. See answers to Q6 and 11.

Q14

Do you agree that the limiting U-value for roof-lights should be based on a roof-light in a horizontal position?

c. Yes

d. No

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

Q15

Do you agree that we should adopt the latest version of BR 443?

c. Yes

d. No

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

ACAN is not in a position to comment

Q16

Do you agree with the proposal of removing the fuel factors to aid the transition from high-carbon fossil fuels?

a. Yes

b. No

If no, please explain your reasoning.

ACAN is not in a position to comment

Q17

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

a. **Yes**
b. **No – proposed standard goes too far**
c. **No – proposed standard does not go far enough**

Table 3.2: Proposed revisions to minimum building services efficiencies and controls for new dwellings

Application	Proposed Part L 2020 standard
Gas boiler efficiency	92% ErP
Heat pump efficiency	SCOP 2.80
Comfort cooling efficiency	SEER 3.87
Lighting	60 lamp lumens per circuit-watt

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

ACAN is not in a position to comment

Q18

Do you agree with the proposal that heating systems in new dwellings should be designed to operate with a flow temperature of 55°C?

a. Yes

b. No – the temperature should be below 55°C

c. No – dwellings should not be designed to operate with a low flow temperature

d. No – I disagree for another reason

If no, please explain your reasoning and provide evidence.

ACAN is not in a position to comment

Q19

How should we encourage new dwellings to be designed to operate with a flow temperature of 55°C?

a. By setting a minimum standard

b. Through the target primary energy and target emission rate (i.e. through the notional building)

c. Other

Please explain your reasoning.

ACAN is not in a position to comment

Q20

Do you agree with the proposals to simplify the requirements in the Building Regulations for the consideration of high-efficiency alternative systems?

a. Yes

b. No

If no, please explain your reasoning.

Q21

Do you agree with the proposal to adopt the latest Standard Assessment Procedure, SAP 10?

a. Yes

b. No

If no, please explain your reasoning.

SAP methodology is not suited to respond to the challenges of new home achieving net zero carbon by 2050 and to provide an actual measure of operational energy. SAP is based on a % reduction from notional baseline building measurements. The methodology to use in order to ensure zero net carbon buildings by 2050 should move from this approach to measure actual building energy use and carbon footprint. In addition, the notional building does not address poor design (incl. overglazed areas leading to overheating) or encourage efficient building form, both of which are instrumental in minimising energy demand. The shortcomings of this methodology relates to the measurement of heating efficiency as the use of gas boiler as the default in the notional building would result in high notional but also inflated improvements in the new building where an efficient heating system like a heat pump is being installed.

More sophisticated advanced modelling methodologies that can more accurately model building performances should be used instead to help with the delivery of low energy, low carbon to net zero carbon buildings. An example of that is Dynamic Thermal Simulation (DTS) in domestic buildings. This would be particularly relevant to medium to large mixed-use developments that may include other uses along multiple residential units (commercial, education, health, leisure, etc.). ¶

Q22

Do you agree with the proposal to update the source of fuel prices to BEIS Domestic energy price indices for SAP 10.2?

a. Yes

b. No

If no, please explain your reasoning.

ACAN is not in a position to comment.

Q23

Do you agree with the method in Briefing Note – Derivation and use of Primary Energy factors in SAP for calculating primary energy and CO2 emissions factors?

a. Yes

b. No

If no, please explain your reasoning.

ACAN is not in a position to comment.

Q24

Do you agree with the removal of government Approved Construction Details from Approved Document L?

a.Yes

b. No

If no, please explain your reasoning.

No, the government should provide a comprehensive set of thermal bridging details. These would be useful in particular for smaller projects as many rely on accredited construction details to demonstrate Y-values achieved in SAP. Contrary to large scale projects where architects and housebuilders can be expected to develop their own library of details, it is wholly unrealistic to expect the industry intervening at smaller scale to upskill and undertake calculations of Y-values for all building junctions, or to commission professionals to do so.

The risk with the current proposals is that smaller projects would select to offset the default thermal bridges by over-compensating the building fabric in other areas or more likely the energy systems. In this scenario, poor design at building junctions would be concealed leading to unnecessary heat loss and raising the risk of condensation within the building fabric, whilst resulting in thermal discomfort.

ACAN supports improvement in thermal bridging calculations that would help ensure reduced thermal bridging and heat loss in homes. But the government should still provide this library of details as a stepping stone to bespoke thermal bridging calculations in 2025.

Q25

Do you agree with the proposal to introduce the technology factors for heat networks, as presented in the draft Approved Document?

a. Yes

b. No, they give too much of an advantage to heat networks

c. No, they do not give enough of advantage to heat networks

d. No, I disagree for another reason

Please explain your reasoning.

Heat networks should not be regarded as a preferred option by default. This was noted in the response to Q2. The emphasis of the documentation should be to prioritise low carbon technology without the use of fossil fuels. Heat networks incur higher capital costs and distribution losses not present in communal or individual heating systems so these need to be carefully analysed against the specific development proposals.

Mechanisms must be put in place to ensure that loop holes are not provided for fossil fuel plant, such as gas CHPs, to be implemented during the transition period to the Standard.

Q26

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.

ACAN is not in a position to comment.

Q27

Do you agree with the external references used in the draft Approved Document L, Appendix C and Appendix D?

a. Yes

b. No

If no, please explain your reasoning and suggest any alternative sources.

ACAN is not in a position to comment.

Q28

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

a. Yes

b. No

If no, please explain your reasoning.

ACAN is not in a position to comment.

Q29

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.

ACAN is not in a position to comment.

Q30

Do you agree that we have adequately covered matters which are currently in the Domestic Ventilation Compliance Guide in the new draft Approved Document F for new dwellings?

a. Yes

b. No

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

ACAN is not in a position to comment.

Q31

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 split into four clearly defined documents based on building typology and age. Restructuring the documents as proposed seems unnecessary and could lead to confusion over scope.

Furthermore, only one of the three is being consulted on currently. This should be re-consulted on when all documents are available.

Q32

Do you agree with our proposed approach to mandating self-regulating devices in new dwellings?

a. Yes

b. No

If no, please explain your reasoning.

Q33

Are there circumstances in which installing self-regulating devices in new dwellings would not be technically or economically feasible?

a. Yes

b. No

If yes, please explain your reasoning and provide evidence.

ACAN is not in a position to comment.

Q34

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.

ACAN is not in a position to comment.

Chapter 4 Part F Changes

Q35

Do you agree that the guidance in Appendix B to draft Approved Document F provides an appropriate basis for setting minimum ventilation standards?

a. Yes

b. No

If no, please explain your reasoning.

No benefit should be given for less airtight buildings.

Q36

Do you agree that using individual volatile organic compounds, informed by Public Health England guidelines, is an appropriate alternative to using a total volatile organic compound limit?

a. Yes

b. No – the Public Health England guidelines are not sufficient

c. No – individual volatile organic compounds should not be used to determine ventilation rates

d. No – I disagree for another reason

If no, please explain your reasoning, and provide alternative evidence sources if appropriate.

Q37

Do you agree with the proposed guidance on minimising the ingress of external pollutants in the draft Approved Document F?

a. Yes

b. No

If no, please explain your reasoning.

Q38

Do you agree with the proposed guidance on noise in the draft Approved Document F?

a. Yes

b. No – this should not form part of the statutory guidance for ventilation, or the guidance goes too far

c. No – the guidance does not sufficiently address the problem

d. No – I disagree for another reason

If no, please explain your reasoning.

The guidance should give prescriptive sound levels thresholds for individual rooms, or fans and requirements for attenuation. This will counter the fact that noise is one of the main reasons that occupants turn off their mechanical ventilation. It is acknowledged that tighter fabric performance measures will require MVHR, so noise is an important issue that needs to be set at a tight level to ensure occupants are living in comfortable conditions, but minimising their energy use overall.

The guidance should include more detail about dealing with external noise for background ventilation, acknowledging that noise could transfer into the home through mechanical ducts too.

Q39

Do you agree with the proposal to remove guidance for passive stack ventilation systems for the Approved Document?

ACAN is not in a position to comment

Q40

Do you agree with the proposal to remove guidance for more airtight naturally ventilated homes?

a. Yes

b. No

If no, please explain your reasoning.

ACAN is not in a position to comment

Q41

Do you agree with the proposal to remove guidance for less airtight homes with mechanical extract ventilation?

a. Yes

b. No

If no, please explain your reasoning.

ACAN is not in a position to comment

Q42

Do you agree with the proposed guidance for background ventilators in naturally ventilated dwellings in the draft Approved Document F?

a. Yes

b. No – the ventilator areas are too large

c. No – the ventilator areas are too small

d. No - I disagree for another reason

If no, please explain your reasoning.

ACAN is not in a position to comment

Q43

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.

ACAN is not in a position to comment

Q44

Do you agree that background ventilators should be installed for a continuous mechanical extract system, at 5000mm^2 per habitable room?

a. Yes

b. No – the minimum background ventilator area is too low

c. No – the minimum background ventilator area is too high

d. No – other

If no, please explain your reasoning.

ACAN is not in a position to comment

Q45

Do you agree with the external references used in the draft Approved Document F, in Appendices B, D and E?

a. Yes

b. No

If no, please explain your reasoning and suggest any alternative sources.

ACAN is not in a position to comment

Q46

Do you agree with the proposed commissioning sheet proforma given in Appendix C of the draft Approved Document F, volume 1?

a. Yes

b. No

If no, please explain your reasoning.

ACAN is not in a position to comment

Q47

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.

Chapter 5 Airtightness

Q48

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.

All homes should have a maximum air permeability of less than 3m3/m2.h at 50Pa. Any guidance that suggests homes are able to have a higher air permeability should be removed to ensure that all new homes have the highest possible energy efficiency.

To achieve an air permeability of less than 3m3/m2.h at 50Pa mechanical ventilation and heat recovery will be required. As a result full natural ventilation should not be considered as an option if new homes in England and Wales are to be built to be energy efficient.

It should be made clear that that it will still be acceptable to fully naturally ventilate buildings in summer months using bypass modes on the mechanical systems.

Q49

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.

As per question 48 the limit for airtightness should be set to less than 3m3/m2.h. As a result full natural ventilation is no longer feasible and as a result mechanical ventilation with heat recovery must be employed to ensure both energy efficient homes and adequate ventilation in winter (with the possibility to switch to a bypass mode to deal with high temperatures in summer).

Q50

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.

The proposed level of uncertainty could unduly affect the results of buildings that achieve a very high level of airtightness. A percentage measure would ensure that very airtight dwellings would require a higher level of accuracy.

Q51

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

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

Q52

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.

Q53

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.

Pulse tests should be an option, but the existing blower door test should be maintained as the primary method of testing as it allows for testing, diagnosis and improvement during construction works.

Q54

Do you think that the proposed design airtightness range of between 1.5 m3/m2.h and the maximum allowable airtightness value in Approved Document L Volume 1 is appropriate for the introduction of the Pulse test?

a. Yes

b. No

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

Given that new buildings are currently achieving airtightness levels as low as 0.1m3/m2/h at 50Pa any new technologies employed should be able to test to the same level.

Q55

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

a. Yes

b. No

Please explain your reasoning.

Q56

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.

ACAN is not in a position to comment

Chapter 6 Compliance, Performance and Providing Information

Q57

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.

Q58

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

ACAN fully supports the provision of information as suggested.

Q59

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

Q60

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

Q61

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

Q62

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.

Q63

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.

Q64

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

Chapter 7 Transitional Arrangements

Q65

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.

In our view two years would allow sufficient time to complete *a phase on a large scale project. However this clause can only be inserted if Building Regulations are updated on a regular basis.*

Q66

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.

Q67

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

Consultation should begin at the soonest opportunity on the proposed 2025 regulations to allow for a smoother transition and allowing projects to be built to new standards sooner, as per the transitional arrangements.

Chapter 8 Feedback on the Impact Assessment

Q68

The Impact Assessment makes a number of assumptions on fabric/services/ renewables costs, new build rates, phase-in rates, learning rates, etc for new homes. Do you think these assumptions are fair and reasonable?

a. Yes

b. No

Please explain your reasoning and provide evidence to support this.

ACAN is not in a position to provide evidence to the contrary.

Q69

Overall, do you think the impact assessment is a fair and reasonable assessment of the potential costs and benefits of the proposed options for new homes?

a. Yes

b. No

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

ACAN is not in a position to provide evidence to the contrary.