

Consultation Response Form

Building Regulations Part L & F Review – Stage 2B

Changes to Part L (conservation of fuel and power) and Part F (ventilation) of the Building Regulations for non-domestic buildings and mitigating overheating in new residential buildings

This consultation is aimed primarily at firms, individuals and their representative bodies within construction and construction-related industries and the building control bodies that enable the building control system to operate. Specific elements may be of interest to members of the public.

This document is the final stage of a three-part consultation about proposed changes to the Building Regulations. The stage 1 consultation ran between December 2019 and March 2020. Stage 2A ran between November 2020 and February 2021.

You can email your response to the questions in this consultation to:

enquiries.brconstruction@gov.wales

If you are responding in writing, please make it clear which consultation and which questions you are responding to:

Building Regulations Part L/F Review – Stage 2B

Written responses should be sent to:

Building Regulations, Welsh Government, Cathays Park, Cardiff, CF10 3NQ.

If you have any queries on this consultation, please email:

enquiries.brconstruction@gov.wales or telephone: 0300 062 8144.

Data Protection

Any response you send us will be seen in full by Welsh Government staff dealing with the issues which this consultation is about. It may also be seen by other Welsh Government staff to help them plan future consultations.

The Welsh Government intends to publish a summary of the responses to this document. We may also publish responses in full. Normally, the name and address (or part of the address) of the person or organisation who sent the response are published with the response. This helps to show that the consultation was carried out properly. If you do not want your name or address published, please tick the box below. We will then blank them out.

Names or addresses we blank out might still get published later, though we do not think this would happen very often. The Freedom of Information Act 2000 and the Environmental Information Regulations 2004 allow the public to ask to see information held by many public bodies, including the Welsh Government. This includes information which has not been published. However, the law also allows us to withhold information in some circumstances. If anyone asks to see information we have withheld, we will have to decide whether to release it or not. If someone has asked for their name and address not to be published, that is an important fact we would take into account. However, there might sometimes be important reasons why we would have to reveal someone's name and address, even though they have asked for them not to be published. We would get in touch with the person and ask their views before we finally decided to reveal the information.

Confidentiality

Responses to consultations may be made public on the internet or in a report.

If you do not want your name and address to be shown on any documents we produce please indicate here

CONSULTATION FORM

Amendments to statutory guidance	
Date:	
Your Name:	Jack Wilkinson-Dix
Your Position <i>(if applicable)</i> :	Policy Officer
Your Organisation <i>(if applicable)</i> :	Energy Saving Trust
Email / Telephone Number:	jack.wilkinsondix@est.org.uk
Your address:	Energy Saving Trust Wales, 33 Cathedral Road, Cardiff CF11 9HB

Type of Organisation: Choose one of the following:	Select one
Builder / Developer	
Small/medium builder	
Volume house builder	
Designer / Engineer /Surveyor	
Local Authority	
Building Control Approved Inspector	
Architect	
Manufacturer/supply chain	
Energy Assessor	
Energy sector	X
Construction professional	
Property Manager / Housing Association / Landlord	
Building Occupier/ Resident	
Other interested party (please specify)	

Question 1

Our aim is that buildings constructed to the Part L 2025 Standard will be capable of becoming carbon neutral over time as the electricity grid and heat networks decarbonise.

Do you agree that the outline of the 2025 Standard in this chapter meets this aim?

a. Yes

b. No

c. Unsure

Please explain your reasoning and provide supporting evidence or alternative suggestions.

Energy Saving Trust supports the Welsh Part L 2025 standard as a key step towards futureproofing the built environment for a net zero world. Futureproofing buildings for net zero will remove the need to subsequently undertake retrofit at cost to the household, wider society and the climate. The electricity grid is rapidly decarbonising, and UK renewable sources generated more electricity than fossil fuels in 2020, with wind power alone generating a quarter of total generation¹. This puts the UK on the path to meeting negative emissions from the power sector by 2033 as projected in National Grid ESO's Future Energy Scenarios². Wales is well-positioned to capitalise on the renewable energy transition given our abundant natural resources. Buildings that primarily rely on electrical power for their heating and operations will benefit from this rapid pace of decarbonisation and effectively be futureproofed for 2050, though many will need additional support to incentivise the transition to electrical heating in particular.

We welcome the focus on decarbonising heating. This is important but should not detract from the focus on overall energy demand. The heating system both in terms of the fuel and its efficiency has a relatively short lifetime (c. 15 years) in comparison to the average building lifetime. Given this, we would prefer to see an 'energy hierarchy' approach where the first priority is to reduce energy demand as low as possible. The next step is to supply heating as efficiently and as low carbon as possible before finally offsetting residual demand/ emissions (by onsite renewables such as PV). On low carbon heating, we support an approach where this is installed in new buildings from Autumn 2023, in the types of buildings which the Welsh Government has indicated are most suited for low-carbon space and or hot water heating. From 2025, our view is that fossil-fuel heating should not be installed in new buildings (except where a relevant exemption applies). We have suggested a delay in Part L and F coming into force above to reflect that our proposals go further than the planned uplift scheduled to come into force in Autumn 2022 allowing more time to work with industry and the supply chain.

Question 2

¹ Carbon Brief; 2021; Analysis: UK is now halfway to meeting its 'net-zero emissions' target. Available at https://www.carbonbrief.org/analysis-uk-is-now-halfway-to-meeting-its-net-zero-emissions-target?utm_campaign=Carbon%20Brief%20Daily%20Briefing&utm_content=20210318&utm_medium=email&utm_source=Revue%20Daily

² National Grid; 2020; Future Energy Scenarios. Available at <https://www.nationalgrideso.com/future-energy/future-energy-scenarios/fes-2020-documents>

We believe that developers will typically deploy heat pumps and heat networks to deliver the low carbon heating requirement of the Part L 2025 Standard where practical. What are your views on this and in what circumstances should other low carbon technologies, such as direct electric heating or hydrogen, be used?

We do not think that the proposed carbon and primary energy based metrics are sufficient to drive low-carbon heating at the rate needed to contribute to the UK's new 2030 emission targets. The proposed approach relies on builders choosing heat pumps or other low carbon alternatives rather than gas + PV.

A stronger approach would be a clear restriction on installing fossil-fuel heating in new buildings from Autumn 2023. For the building types where either space heating (for example, warehouses) or hot water heating (for example, hotels and hospitals) is not yet feasible and cost-effective (for builder and end-user), there could be 'class' exemptions. There should also be a provision to exempt individual buildings/ areas (for example, where buildings would be expected to connect to a forthcoming heat network or low carbon gas pilot). The exemptions should be reviewed on an annual basis.

This Currie and Brown modelling for the Climate Change Committee (CCC) (<https://www.theccc.org.uk/wp-content/uploads/2019/07/The-costs-and-benefits-of-tighter-standards-for-new-buildings-Currie-Brown-and-AECOM.pdf>) suggests that low-carbon heating would be affordable for the developer and cost effective for occupants in offices now if installed as part of a package of measures including higher standards for fabric and building services (particularly lighting).

P58-9 of the Currie and Brown report (<https://www.theccc.org.uk/wp-content/uploads/2019/07/The-costs-and-benefits-of-tighter-standards-for-new-buildings-Currie-Brown-and-AECOM.pdf>) suggests that the provision of a ASHP as part of a package to deliver a 25 percent uplift (from English Part L 2013 emissions) could be delivered for under a 2 percent increase in the capital build cost, or less than 1 percent for an air-conditioned office. The modelling found the package would deliver lifetime savings for the occupants (due to the high cost savings delivered by improved lighting efficiency).

Given this saving, the low increase to build costs and BEIS research suggesting that the supply chain could scale up, we would support low carbon heating for Type 1 and 2 buildings and heat pumps or electric point-of-use water heating (where demand is too low for heat pumps) for Type 1 and 3 buildings from Autumn 2023.

Direct electric heating: We agree that there is a role for direct electric heating, particularly in buildings/ homes with a very low heat demand. However, the lower capital cost means that there is a risk of this being installed inappropriately (with increased costs for the building user, a higher emissions and impact on the grid). To mitigate this risk, we recommend restricting this option be contingent upon good building design and high fabric standards where it can be demonstrated that a heat pump would not be justified (for example, where the lower lifetime energy bills would not outweigh the higher capital costs). As there would still be a risk that the as-built building had a higher space-heating demand than the modelled ('performance gap'), there could be an additional requirement for a post-construction evaluation. Where there is more than a 10 percent variance between actual and modelled demand, the builder could be required to install further mitigation measures. With these safeguards, we would be comfortable with direct electric heating being classed as low carbon heating and permitted instead of a heat pump from Autumn 2023 in Type 1 and 2 buildings.

Heat networks: We would be comfortable with heat networks currently supplied by gas-CHP, direct electric heating and electric point-of-use water heating being classed a 'low carbon' heating.

Low carbon gases: There is not enough information available on the safety, availability, cost, overall role of hydrogen/ other low carbon gases to set out a role for them from 2025 and we cannot afford to delay decarbonisation work in case it becomes feasible later. The Climate Change Committee emphasise that all delays will increase the cost and difficulty of the challenge.

Question 3

Do you agree that some non-domestic building types are more suitable for low carbon heating and hot water, and that some non-domestic building types are more challenging?

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning.

Question 4

Do you agree with the allocation of building types to space and water heating demand types, as presented in Table 2.1 of this consultation document?

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning, including how different building types should be allocated.

Energy Saving Trust accepts that a range of space and water heating demands in non-domestic buildings exist but would like further information as to how the building types were allocated to Types 1-3 and whether a more detailed assessment will be undertaken to categorise building types.

We would draw Welsh Government's attention to the SEA response and research they commissioned into the different buildings listed under Table 2.1 using the EPC dataset. This research failed to identify any strong data trends underlying the Building Types outlined in Table 2.1 (when comparing EPCs to the typology described in Table 2.1).

Unless supporting evidence is made publicly available, we would like to see greater granularity in terms of Type 2 buildings as they relate to hot water demand. There are a range of products on the market designed to serve commercial demands for hot water so we would like to see greater specificity assigned to different building types, potentially based on size. As an example, larger buildings like major hospitals would remain in Type 2 but smaller practices would be considered as Type 1.

Question 5

Do you think the Part L 2025 Standard should introduce low carbon space *heating* for buildings with Type 1 or Type 2 demand (buildings that have space heating demand more suitable for heat pumps)?

a. **Yes in 2025** – our proposed date

b. No – Another date (please specify):

c. Unsure

Please explain your reasoning.

We agree with Option A. For buildings which are classed as having space heating demand more suitable to heat pumps the priority should be installing low carbon heat pumps as soon as possible. We recognise that these requirements cannot be brought in over night and think that aligning with the Future Building Standard set out by UK Government for England will send a strong market signal. Early movers should be encouraged and supported to transition to low carbon heating ahead of the 2025 Standard.

Question 6

Do you think the Part L 2025 Standard should introduce low carbon space *heating* for buildings with Type 3 demand (buildings that have space heating demand less suitable for heat pumps)?

a. **Yes in 2025**

b. No – Another date (please specify)

c. Unsure

Please explain your reasoning.

While we recognise that Type 3 buildings can have more challenging heating needs we think that all elements of the Part L 2025 Standard should be brought in as early as possible to drive the rollout of low carbon heat. Type 3 buildings can be particularly complex to decarbonise so a wider mix of technologies like spot or radiant heating may be necessary. As per our response to Question 4, we would welcome greater clarity on which buildings will be classified as Type 3 and the methodology that underpins this. We wouldn't want every building within a class to be considered 'less suitable for heat pumps' by default.

Question 7

Do you think the Part L 2025 Standard should introduce low carbon water *heating* for buildings with Type 1 or Type 3 demand (buildings that have water heating demand more suitable for point-of-use heaters or heat pumps)?

a. **Yes in 2025** – our proposed date

b. No – Another date (please specify):

c. Unsure

Please explain your reasoning.

See response to Q5.

Question 8

Do you think the Part L 2025 Standard should introduce low carbon water *heating* for buildings with Type 2 demand (buildings that have water heating demand less suitable for point-of-use heaters or heat pumps)?

a. **Yes in 2025**

b. No – Another date (please specify)

c. Unsure

Please explain your reasoning.

Question 9

We would welcome any further suggestions, beyond those provided in this consultation, for improving the modelling process; Part L and Part F compliance; and the actual energy performance of non-domestic buildings. Please provide related evidence.

Energy Saving Trust welcomes the consultation's acknowledgement that the 'design for compliance' culture in the UK is a significant barrier. We also welcome the approach to begin tackling the difference between the average design and actual performance ('performance gap') in new builds by:

- i) Improving to SBEM and the National Calculation Methodology particularly those which address the performance gap
- ii) Strengthening compliance
- iii) Supporting building owners to better understand how to use their building efficiently). We would like to see the way in which commissioning information is presented move towards a digital buildings passport

Whilst this is certainly positive, the overall approach here could be strengthened by:

1. Replacing the Primary Energy metric with alternative metrics on i) Energy Use Intensity ('at the meter' energy use) and ii) space heating and cooling demand (to support the shift to low carbon heating). These 'user friendly' metrics help tenants and building occupants to 'see' how the base building is designed to work and to compare with actual usage.
2. Endorsing Post-Occupancy Evaluations (PoE) and requiring it for buildings that have received public funding.

As this document

<https://www.betterbuildingspartnership.co.uk/sites/default/files/media/attachment/EI%20DfP%20Article%20Published%20EW%20Jan17.pdf>) highlights the National Australian Built Environment Rating System (NABERS) has been very successful in closing the gap between the modelled and actual energy consumption (the 'performance gap') with its approach to energy-rated 'base builds' (the building with fixed services including lifts and HVAC). This was partly achieved by stimulating a new market for highly energy-rated 'base builds' which developers then strove to meet. Buyers and tenants now expect buildings to operate within 10 percent of the design forecast.

We would also direct Welsh Government to SEA's response to this question, and particularly the elements regarding improvements to thermal bridging.

Question 10

What level of uplift to the energy efficiency standards for non-domestic buildings in the Building Regulations should be introduced in 2021?

- | | |
|---|--|
| a. Option 1 – average 18% CO ₂ reduction | |
| b. Option 2 – average 28% CO ₂ reduction (this is the Government's preferred option) | |
| c. No change | |
| d. Other level of uplift (please specify) | |
| e. Unsure | |

Please explain your reasoning and provide supporting evidence or alternative suggestions where applicable.

Energy Saving Trust thinks that Option 2 (28% emissions reduction) should be introduced as an outcome of this review. It is vital that the revised standards that emerge from this review of regulations result in new non-domestic buildings that are responsible for as few emissions as possible.

Question 11

Do you agree with the way that we are proposing to apply primary energy as the principal performance metric?

- | | |
|-----------|--|
| a. Yes | |
| b. No | |
| c. Unsure | |

If you answered no, please explain your reasoning.

Question 12

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

- | | |
|-----------|--|
| a. Yes | |
| b. No | |
| c. Unsure | |

If you answered no, please explain your reasoning.

CO₂ is a useful secondary metric to record.

Question 13

Do you agree with the approach to calculating CO2 and primary energy factors, referred to in paragraph 3.5.7 of this consultation document?

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning and provide supporting evidence or alternative suggestions.

Question 14

Do you agree with the proposals for natural gas being assigned as the heating fuel for any fuels with a worse CO2 emission factor than natural gas?

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning and provide supporting evidence or alternative suggestions.

Question 15

Do you agree with our proposal of using a natural gas heating system in the notional building when electricity is specified as a heating fuel?

a. Yes - SEA said yes

b. No

c. Unsure

If you answered no, please explain your reasoning and provide supporting evidence or alternative suggestions.

Question 16

Do you agree with the proposal for the treatment of domestic hot water in the notional building?

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning and provide alternative suggestions.

Question 17

Do you agree with the proposals for the details of the district heating system for the notional building described when connecting to an existing heat network, as presented in the draft NCM modelling guide?

a. Yes

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

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

d. No, I disagree for another reason

e. Unsure

If you answered no (b, c or d), please explain your reasoning and provide supporting evidence or alternative suggestions.

Question 18

Do you agree with the proposal for connecting to a new heat network, as presented above?

a. Yes

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

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

d. No, I disagree for another reason

e. Unsure

If you answered no (b, c or d), please explain your reasoning and provide supporting evidence or alternative suggestions.

Question 19

Do you agree with the proposed changes to the National Calculation Methodology Modelling Guide and activity database?

a. Yes

b. Yes, but additional changes should be made

c. No

d. Unsure

If you answered b or c, please explain your reasoning and provide alternative suggestions.

Question 20

We would welcome any further suggestions for revising the outputs from SBEM, which would enable easier checking by building control on building completion. Please provide related evidence.

Question 21

Do you agree with the proposals for limiting heat gains in non-domestic buildings?

- a. Yes
- b. No, they go too far
- c. No, they don't go far enough
- d. No, I disagree for another reason
- e. Unsure

If you answered no (b, c or d), please explain your reasoning and provide alternative suggestions.

Question 22

Do you agree with the proposed minimum standards for fabric performance in new non-domestic buildings as presented in Table 3.5 of this consultation document?

- a. Yes
- b. No, the standards go too far
- c. No, the standards do not go far enough
- d. No, I disagree for another reason
- e. Unsure

If you answered no (b, c or d), please explain your reasoning and provide supporting evidence or alternative suggestions.

We support higher fabric values (see table below) and note that many of the proposed Welsh Government values are less stringent than those proposed by the UK Government in their Future Buildings Standard consultation for England.

These higher values have been proposed by RIBA as part of their 2030 Climate Challenge (<https://www.architecture.com/about/policy/climate-action/2030-climate-challenge>).

	Welsh Government proposal Wm2/.K	UK Government FBS proposal Wm2/.K	Energy Saving Trust proposal Wm2/.K	Passivhaus Wm2/.K
Roof	0.2	0.16-0.18	0.1-0.12	<0.15
Wall	0.26	0.26	0.1-0.15	
Floor	0.22	0.18	0.1-0.12	
Window	1.6	1.6	1.2	0.8
Roof light	2.2	2.2	1.2	
Doors	1.8	1.4	1.4	
Air permeability m3 / (h.m2) @50Pa	8	8	5	

Question 23

Do you agree with the proposed improvement in the minimum standards for new or replacement windows in existing non-domestic buildings which are domestic in character?	
a. Yes	
b. No	
c. Unsure	
If you answered no, please explain your reasoning and provide supporting evidence or alternative suggestions.	
See response to Q22.	

Question 24

Do you agree with the further guidance on reducing moisture risks when upgrading retained thermal elements?	
a. Yes	
b. No	
c. Unsure	
If you answered no, please explain your reasoning and provide supporting evidence or alternative suggestions.	

Question 25

Do you agree with the draft guidance in paragraph 4.15 of the draft Approved Document L, volume 2: <i>buildings other than dwellings</i> on reducing unwanted air infiltration when carrying out work to existing non-domestic buildings?	
a. Yes	
b. No	
c. Unsure	
If you answered no, please explain your reasoning.	

Question 26

Do you agree that the limiting U-value for rooflights in new and existing non-domestic buildings should be based on a rooflight in a horizontal position, as detailed in paragraph 4.4 of draft <i>Approved Document L, volume 2: buildings other than dwellings</i> ?	
a. Yes	
b. No	
c. Unsure	
If you answered no, please explain your reasoning.	

Question 27

Do you agree that we should adopt the latest version of BR 443 for calculating U-values in new and existing non-domestic buildings, as detailed in paragraph 4.1 of draft <i>Approved Document L, volume 2: buildings other than dwellings</i> ?	
a. Yes	
b. No	
c. Unsure	
If you answered no, please explain your reasoning.	

Question 28

Do you agree with the newly proposed minimum efficiencies for natural gas, oil and LPG boiler and domestic hot water system installations in new non-domestic buildings in Section 6 of draft <i>Approved Document L, volume 2: buildings other than dwellings</i> ?	
a. Yes	
b. No, the standards go too far	
c. No, the standards do not go far enough	
d. Unsure	
If you answered no (b or c), please explain your reasoning.	

Question 29

Do you agree with the proposed set of standards for air distribution systems for new non-domestic buildings in Section 6 of draft <i>Approved Document L, volume 2: buildings other than dwellings</i> ?	
a. Yes	
b. No, the standards go too far	
c. No, the standards do not go far enough	
d. Unsure	
If you answered no (b or c), please explain your reasoning.	

Question 30

Do you agree with the minimum efficacy proposals for lighting in new non-domestic buildings in Section 6 of draft *Approved Document L, volume 2: buildings other than dwellings*?

- a. Yes
- b. No, the standards go too far
- c. No, the standards do not go far enough
- d. Unsure

If you answered no (b or c), please explain your reasoning.

Question 31

Do you agree with the proposals for cooling in new non-domestic buildings in Section 6 of draft *Approved Document L, volume 2: buildings other than dwellings*?

- a. Yes
- b. No, the standards go too far
- c. No, the standards do not go far enough
- d. Unsure

If you answered no (b or c), please explain your reasoning.

Question 32

Do you agree with the proposals for improving the commissioning guidance and the provision of new information for new non-domestic buildings in Section 8 and 9 of draft *Approved Document L, volume 2: buildings other than dwellings*?

- a. Yes
- b. Yes, but additional changes should be made
- c. No
- d. Unsure

If you answered (b) or (c), please explain your reasoning and provide alternative suggestions.

Question 33

Do you agree with the guidance proposals for adequate sizing and controls of building services systems in new non-domestic buildings, as detailed in Sections 5 and 6 of draft *Approved Document L, volume 2: buildings other than dwellings*?

a. Yes

b. No, I do not agree with providing guidance on this

c. No, the guidance should be improved

d. Unsure

If you answered no (b or c), please explain your reasoning.

Question 34

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

a. Yes, through a minimum standard set in paragraph 5.9 of the *Approved Document L, volume 2: buildings other than dwellings*

b. Yes, through carbon and primary energy credit in SBEM

c. Yes, by another means

d. No, the temperature should be below 55°C

e. No, this standard should not be applied to all new buildings

f. No, I disagree for another reason

g. Unsure

Please explain your reasoning.

By setting a minimum standard. This flow temperature should be legislated as a mandatory minimum standard with sufficient monitoring and enforcement. It is important that heating and distribution systems are installed now that can cope with low-carbon heating systems in the future. Regardless of heating technology installed, a lower flow temperature increases the efficiency of the system which lowers consumer bills and emissions in the long term. A lower flow temperature should be set as a minimum standard for all heating systems.

Question 35

Do you agree with the proposals to clarify, rationalise and simplify the guidance for building services in new non-domestic buildings, and to incorporate the standards of the Non-Domestic Building Services guidance into the main body of the draft *Approved Document L, volume 2: buildings other than dwellings*?

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning.

Question 36

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

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning.

Question 37

Do you agree with the proposals for replacement of fixed building services in existing non-domestic buildings as detailed in paragraphs 5.4 to 5.7 of draft *Approved Document L, volume 2: buildings other than dwellings*?

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning.

Question 38

Do you agree with the newly proposed minimum efficiencies for natural gas, oil and LPG boiler and domestic hot water system installations in existing non-domestic buildings in Section 6 of draft *Approved Document L, volume 2: buildings other than dwellings*?

- | | |
|---|--|
| a. Yes | |
| b. No, the standards go too far | |
| c. No, the standards do not go far enough | |
| d. Unsure | |

If you answered no (b or c), please explain your reasoning.

Question 39

Should minimum boiler efficiency standards in existing non-domestic buildings still benefit from relaxations through the use of heating efficiency credits?

- | | |
|--|--|
| a. Yes, boiler installations should continue to benefit from heating efficiency credits | |
| b. No, boiler installations should no longer benefit from heating efficiency credits (the Government's proposal) | |
| c. Unsure | |

If you answered yes, please explain your reasoning.

Question 40

Do you agree with the proposed set of standards for air distribution systems for existing non-domestic buildings in Section 6 of draft *Approved Document L, volume 2: buildings other than dwellings*?

- | | |
|---|--|
| a. Yes | |
| b. No, the standards go too far | |
| c. No, the standards do not go far enough | |
| d. Unsure | |

If you answered no (b or c), please explain your reasoning.

Question 41

Do you agree with the minimum efficacy proposals for lighting in existing non-domestic buildings in Section 6 of draft *Approved Document L, volume 2: buildings other than dwellings*?

- a. Yes
- b. No, the standards go too far
- c. No, the standards do not go far enough
- d. Unsure

If you answered no (b or c), please explain your reasoning.

Question 42

Do you agree with the proposals for cooling in existing non-domestic buildings in Section 6 of draft *Approved Document L, volume 2: buildings other than dwellings*?

- a. Yes
- b. No, the standards go too far
- c. No, the standards do not go far enough
- d. Unsure

If you answered no (b or c), please explain your reasoning.

Question 43

Do you agree with the proposals for requirements relating to the commissioning and providing information to building owners for existing non-domestic buildings?

- a. Yes
- b. Yes, but additional changes should be made
- c. No
- d. Unsure

If you answered (b) or (c), please explain your reasoning and provide alternative suggestions.

Question 44

Do you agree with the guidance proposals for adequate sizing and controls of building services systems in existing non-domestic buildings, as detailed in Sections 5 and 6 of draft *Approved Document L, volume 2: buildings other than dwellings*?

a. Yes

b. No, do not agree with providing this guidance

c. No, the guidance should be improved

d. Unsure

If you answered no (b or c), please explain your reasoning.

Question 45

Do you agree with the proposal that when whole wet space heating systems (i.e. boiler and radiators) are replaced in existing non-domestic buildings the replacement system should be designed to operate with a flow temperature of 55°C or lower?

a. Yes, through a minimum standard set in paragraph 5.9 of *Approved Document L, volume 2: buildings other than dwellings*

b. Yes, through carbon and primary energy credit in SBEM

c. Yes, by another means

d. No, the temperature should be below 55°C

e. No, this standard should not be applied to all existing buildings

f. No, I disagree for another reason

g. Unsure

Please explain your reasoning.

By setting a minimum standard. This flow temperature should be legislated as a mandatory minimum standard with sufficient monitoring and enforcement. It is important that heating and distribution systems are installed now that can cope with low-carbon heating systems in the future. Regardless of heating technology installed, a lower flow temperature increases the efficiency of the system which lowers consumer bills and emissions in the long term. A lower flow temperature should be set as a minimum standard for all heating systems.

Question 46

Do you agree with the proposals to restructure the guidance for building services in existing non-domestic buildings, and to incorporate the standards of the Non-Domestic Building Services guidance into the main body of the draft *Approved Document L, volume 2: buildings other than dwellings*?

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning.

Question 47

Do you agree the Government should continue to provide guidance for minimum building services efficiencies in existing non-domestic buildings, if the standard does not go significantly further than the Ecodesign regulations?

a. Yes

b. No, the Ecodesign regulations are sufficient

c. No

d. Unsure

If you answered no (b or c), please explain your reasoning.

Question 48

Do you agree with the changes made to simplify, rationalise and clarify the guidance, and the updates to external references in Appendix E and Appendix F, in draft *Approved Document L, volume 2: buildings other than dwellings*, as outlined in paragraph 3.12.1 of the consultation document?

a. Yes

b. Yes, but not with the changes to the supplementary guidance

c. Yes, but not with the external references

d. No

e. Unsure

If you answered no, please explain your reasoning. Please do not repeat comments on the changes made to simplify, rationalise and clarify the guidance for Building Services which you have already provided under Questions 38, 51 and 52.

Question 49

Do you agree that the measures in Tables D.1 and D.2 of Appendix D of draft *Approved Document L, volume 2: buildings other than dwellings* are likely to be technically, functionally and economically feasible under normal circumstances?

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning.

Question 50

Do you agree with the proposals for relaxation factors for modular and portable buildings, as detailed in Tables 2.2 and 2.3 of draft *Approved Document L, volume 2: buildings other than dwellings*?

a. Yes

b. No, the requirements go too far

c. No, the requirements do not go far enough

d. Unsure

If you answered no (b or c), please explain your reasoning and provide supporting evidence or alternative suggestions.

Question 51

Do you think that the Pulse methodology should be an approved means of demonstrating airtightness for non-domestic buildings?

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning and provide supporting evidence.

Yes, Energy Saving Trust supports the introduction of the pulse test method of airtightness testing though do not believe it should be the sole method used. This is because any method of airtightness testing should be sensitive enough to test at 0.1 m³/m²/hr at 50Pa. Pulse methodology is not sensitive enough to do this and cannot provide a means of sustained pressurisation for leakage path diagnostic purposes. Ensuring effective identification and remediation of significant air tightness defects should remain one of the test's primary objectives

Question 52

Do you agree that we should adopt an independent approved airtightness testing methodology such as the CIBSE draft methodology for non-domestic buildings?	
a. Yes, and the CIBSE methodology is appropriate	
b. Yes, but with a methodology other than CIBSE	
c. No, an independent approved airtightness methodology shouldn't be adopted.	
d. Unsure	
If you answered no, please explain your reasoning.	

Question 53

Do you agree with the proposal for guidance on the calibration of devices that carry out airtightness testing in new and existing non-domestic buildings?	
a. Yes	
b. No	
c. Unsure	
If you answered no, please explain your reasoning and provide alternative suggestions.	

Question 54

Do you agree with the proposed approach to energy sub-metering, as detailed in Section 5 of draft <i>Approved Document L, volume 2: buildings other than dwellings</i> ?	
a. Yes	
b. No	
c. Unsure	
If you answered no, please explain your reasoning and provide alternative suggestions.	

Question 55

Do you agree with the proposals for transitional arrangements for buildings other than dwellings?	
a. Yes	
b. No	
c. Unsure	
If you answered no, please explain your reasoning and provide alternative suggestions.	

Question 56

Do you agree with the proposed guidance in Section 1 and Section 2 of draft *Approved Document F, volume 2: buildings other than dwellings* on minimising the ingress of external pollutants and on the proper installation of ventilation systems in non-domestic buildings?

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning and provide alternative suggestions.

Question 57

Do you agree with the proposed guidance for reducing noise nuisance for ventilation systems in non-domestic buildings?

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning and provide alternative suggestions.

Question 58

Do you agree with the additional guidance provided in paragraphs 1.18 to 1.26 of the draft *Approved Document F, volume 2: buildings other than dwellings* on the installation of ventilation systems?

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning.

Question 59

Do you agree that the guidance in Appendix B of the draft *Approved Document F, volume 2: buildings other than dwellings* provides an appropriate basis for setting minimum ventilation standards?

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning.

Question 60

Do you agree with the list of industry guidance presented in Section 1 of draft *Approved Document F, volume 2: buildings other than dwellings*?

a. Yes

b. Yes, but additional guidance should be provided

c. No

d. Unsure

Please explain your reasoning and where relevant provide alternative suggestions for guidance.

Question 61

Do you agree with the list of references to industry guidance presented in Appendix C and Appendix D in the draft *Approved Document F, volume 2: buildings other than dwellings*?

a. Yes

b. No, the Government should amend the list of references

c. No, for another reason

d. Unsure

If you answered no (b or c), please explain your reasoning and provide alternative suggestions.

Question 62

Do you agree with the proposals to simplify, rationalise and clarify the Approved Document guidance in draft *Approved Document F, volume 2: buildings other than dwellings* as outlined in paragraph 4.3.7 of the consultation document?

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning and provide alternative suggestions.

Question 63

Do you agree with the guidance for the ventilation of car parks and offices, as detailed in Section 1 of draft *Approved Document F, volume 2: buildings other than dwellings*?

- | | |
|---|--|
| a. Yes | |
| b. Yes, but some improvements can be made | |
| c. No, the guidance should be significantly changed | |
| d. Unsure | |

If you answered b or c, please explain your reasoning and provide alternative suggestions. Please note that the appropriate questions on measures to prevent the spread of infection are detailed in section 4.4 of this consultation document.

Question 64

Do you agree with the proposals in Section 3 of draft *Approved Document F, volume 2: buildings other than dwellings*, when replacing an existing window with no background ventilators?

- | | |
|---|--|
| a. Yes | |
| b. No, the standards do not go far enough | |
| c. No, the standards go too far | |
| d. Unsure | |

If you answered no, please explain your reasoning and provide alternative suggestions.

Question 65

Do you agree with the proposal to provide a completed commissioning sheet to the building owner and associated guidance in Section 4 of draft *Approved Document F, volume 2: buildings other than dwellings*?

- | | |
|-----------|--|
| a. Yes | |
| b. No | |
| c. Unsure | |

If you answered no, please explain your reasoning.

Question 66

Do you agree with the proposed standards for provision of ventilation for common spaces in offices, shown in paragraph 1.36 of draft *Approved Document F, volume 2: buildings other than dwellings*?

- | | |
|-----------|--|
| a. Yes | |
| b. No | |
| c. Unsure | |

If you answered no, please explain your reasoning.

Question 67

Do you agree that extract ventilation in bathrooms, WCs, and other sanitary accommodation should be capable of operating in a continuous mode if necessary?	
a. Yes	
b. No	
c. Unsure	
If you answered no, please explain your reasoning.	

Question 68

Do you agree with the proposal for indoor air quality monitoring in offices as outlined in paragraphs 1.39 to 1.41 of draft <i>Approved Document F, volume 2: buildings other than dwellings</i> ?	
a. Yes	
b. Yes, but with qualifications	
c. No	
d. Unsure	
If you answered b or c, please explain your reasoning and provide any suggestions for guidance if applicable.	

Question 69

If applicable, please provide any suggestions for guidance for indoor air quality monitoring (e.g. CO2 monitoring) in non-domestic buildings.

Question 70

Do you agree with the proposals for systems that recirculate air as outlined in paragraph 1.46 of draft <i>Approved Document F, volume 2: buildings other than dwellings</i> ?	
a. Yes	
b. No	
c. Unsure	
If you answered no, please explain your reasoning.	

Question 71

Do you agree with the proposed minimum ventilation standard and indoor air quality monitoring in occupiable rooms in all types of non-domestic buildings where singing, loud speech or aerobic exercise may take place, where low temperature and low humidity environments may exist, or where members of the public may gather in large groups? These are outlined in paragraphs 1.27 and 1.28 of draft *Approved Document F, volume 2: buildings other than dwellings*.

- | | |
|-----------------------------|--|
| a. Yes | |
| b. Yes, with qualifications | |
| c. No | |
| d. Unsure | |

If you answered b or c, please explain your reasoning and provide any suggestions for guidance if applicable.

Question 72

Do you think the mitigating measures to protect against infection via aerosols would be suitable for any non-domestic buildings other than those stated in the Approved Document guidance?

- | | |
|-----------|--|
| a. Yes | |
| b. No | |
| c. Unsure | |

If you answered yes, please explain your reasoning and provide evidence to support this.

Question 73

Do you agree with the extension of the scope to cover residential (institutional) and residential (other) buildings described in Table 0.1 in the draft Approved Document S?

- | | |
|--|--|
| a. Yes | |
| b. Yes, but they should be expanded to include more building types and/or existing buildings | |
| c. No, they should only include flats and houses | |
| d. No, I disagree for another reason | |
| e. Unsure | |

Please explain your reasoning.

Question 74

Do you agree with the proposed changes to the simplified method as outlined in Table 1.2 of draft *Overheating Approved Document*?

a. Yes

b. No

c. Unsure

If you answered no, please explain your reasoning.

Question 75

Do you agree with the proposals to ensure noise is considered in new residential buildings when the overheating strategy is in use, and the proposed guidance in Section 2 of the draft *Overheating Approved Document*?

a. Yes

b. Yes, but with amendments to the guidance

c. No, I do not agree with limiting noise when the overheating strategy is in use

d. Unsure

If you answered b or c, please explain your reasoning and provide alternative suggestions.

Question 76

Do you agree with minimising the ingress of external pollutants when the overheating strategy is in use, and that the external pollutants guidance in draft *Approved Document F, volume 1: dwellings* should be followed where practicable?

a. Yes

b. Yes, but with amendments to the guidance

c. No, I do not agree with minimising the ingress of external pollutants when the overheating strategy is in use

d. Unsure

If you answered b or c, please explain your reasoning and provide alternative suggestions.

Question 77

Do you agree with the proposals on security in Section 2 of the draft <i>Overheating Approved Document</i> in new residential buildings?	
a. Yes	
b. No	
c. Unsure	
If you answered no, please explain your reasoning and provide alternative suggestions.	

Question 78

Do you agree with the protection from falling guidance proposed in Section 3 of the draft <i>Overheating Approved Document</i> ?	
a. Yes	
b. No	
c. Unsure	
If you answered no, please explain your reasoning and provide alternative suggestions.	

Question 79

Do you consider the guidance on protection from falling proposed in Section 2 of the draft <i>Overheating Approved Document</i> should also include requirements to avoid over-stretching? (such a maximum distance between the inside face of the wall and the maximum position of the window handle?)	
a. Yes – please also provide evidence/reasoning	
b. No	
c. Unsure	
If you answered no, please explain your reasoning and provide alternative suggestions.	

Question 80

Are there any further issues which affect usability that should be included in the draft <i>Overheating Approved Document</i> ?	
a. Yes	
b. No	
c. Unsure	
Please explain your reasoning and provide supporting evidence.	

Question 81

Please provide any feedback you have on the impact assessment here, including the assumptions made and the assessment of the potential costs and benefits of the proposed options we have made.