

## Section A: Non-Domestic Buildings

### The Future Buildings Standard

**Question 1):** Our aim is that buildings constructed to the Future Buildings 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 Future Buildings Standard in this chapter meets this aim?

a) Yes

b) No

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

**Question 2):** We believe that developers will typically deploy heat pumps and heat networks to deliver the low carbon heating requirement of the Future Buildings 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?

**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

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

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

**Question 5):** We would like to introduce the Future Buildings Standard for all buildings as quickly as possible. When do you think the Future Buildings 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) 2025 – our proposed date
- b) Another date (please specify)

Please explain your reasoning.

**Question 6):** We would like to introduce the Future Buildings Standard for all buildings as quickly as possible. When do you think the Future Buildings 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) 2025
- b) Another date (please specify)

Please explain your reasoning.

**Question 7):** We would like to introduce the Future Buildings Standard for all buildings as quickly as possible. When do you think the Future Buildings 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) 2025 – our proposed date
- b) Another date (please specify)

Please explain your reasoning.

**Question 8):** We would like to introduce the Future Buildings Standard for all buildings as quickly as possible. When do you think the Future Buildings 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) 2025
- b) Another date (please specify)

Please explain your reasoning.

### **Interim uplift to Part L standards for non-domestic buildings**

**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.

**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 22% CO<sub>2</sub> reduction

- b) **Option 2 – average 27% CO<sub>2</sub> reduction (this is the Government's preferred option)**
- c) No change
- d) Other level of uplift (please specify)

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

**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

If you answered no, please explain your reasoning.

**Question 12): Do you agree with using CO<sub>2</sub> as the secondary performance metric?**

- a) **Yes**
- b) No

If you answered no, please explain your reasoning.

**Question 13): Do you agree with the approach to calculating CO<sub>2</sub> and primary energy factors, referred to in paragraph 3.5.7 of this consultation document?**

- a) **Yes**
- b) No

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 CO<sub>2</sub> emission factor than natural gas?**

- a) Yes**
- b) No**

**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 hybrid electric/heat pump heating system in the notional building when electricity is specified as a heating fuel?**

- a) Yes**
- b) No**

**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**

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

**Question 17):** Do you agree with the proposal for 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

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 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

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

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 do not go far enough d) No, I disagree for another reason**

**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 3.2 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**

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

**Question 23): Do you agree with the proposed minimum standards for fabric performance of new thermal elements in existing non-domestic buildings as presented in Table 3.3 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

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

**Question 24): Do you agree with the draft guidance in paragraph 4.15 of the draft *Approved Document L, volume 2: buildings other than dwellings* on reducing unwanted air infiltration when carrying out work to existing non-domestic buildings?**

a) Yes

b) No

If you answered no, please explain your reasoning.

**Question 25): 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 *Approved Document L, volume 2: buildings other than dwellings*?**

a) Yes

b) No

If you answered no, please explain your reasoning.

**Question 26): 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 *Approved Document L, volume 2: buildings other than dwellings*?**

a) Yes

b) No



**If you answered no, please explain your reasoning.**

BR443 no longer includes the window configuration to be used, only a size. Needs to be clearer as to which window configuration is used for the calculations.

**Question 27): 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 *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

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

**Question 28): Do you agree with the proposed set of standards for air distribution systems for 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

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

**Question 29): Do you agree with the proposals for self-regulating devices for new non-domestic buildings, as set out in Sections 5 and 6 of draft *Approved Document L, volume 2: buildings other than dwellings*?**

- a) Yes
- b) No

**If you answered no, 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**

**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**

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

**Question 32): Do you agree with the proposals to require building automation and control systems in new non-domestic buildings, when such buildings have a heating or air-conditioning system over 290kW?**

- a) Yes**
- b) No, a different trigger point should be used**
- c) No, I do not agree that building automation and control systems should be required in new buildings**
- d) No, I disagree for another reason**

**If you answered no (b, c or d), please explain your reasoning and provide alternative suggestions. Please also highlight any unintended consequences that may result from setting this standard.**

**Question 33): Do you agree with the technical specification for new building automation and control systems as EN 15232, Class A?**

- a) Yes
- b) No, the requirements go too far
- c) No, the requirements do not go far enough

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

**Question 34): Do you agree with the proposals for improving the commissioning guidance for new non-domestic buildings in Section 8 and 9 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) No, I disagree for another reason

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

**Question 35): Do you agree with the proposals for requirements relating to the assessment of overall energy performance of building services installations and providing information to building owners for new non-domestic buildings given in sections 8 and 9 of *Approved Document L, volume 2: buildings other than dwellings*?**

- a) Yes
- b) No

**If you answered no, please explain your reasoning.**

**Question 36): 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

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

**Question 37):** 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

Please explain your reasoning.

**Question 38):** 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 *Approved Document L, volume 2: buildings other than dwellings*?

- a) Yes
- b) No

If you answered no, please explain your reasoning.

**Question 39): 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**

**If you answered no, please explain your reasoning.**

**Question 40): Do you agree with the efficiency proposals for replacement 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**

**If you answered no, please explain your reasoning.**

**Question 41): 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**

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

**Question 42): 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)

If you answered yes, please explain your reasoning.

**Question 43): 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

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

**Question 44): Do you agree with our proposed approach and guidance to mandating self-regulating controls in existing non-domestic buildings, including technical and functional feasibility, as detailed in Sections 5 and 6 of draft *Approved Document L, volume 2: buildings other than dwellings*?**

- a) Yes
- b) No

If you answered no, please explain your reasoning.

**Question 45): 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

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

**Question 46): 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

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

**Question 47): Do you agree with the proposals that when Building Automation and Control System is installed in an existing non-domestic building with a heating or air-conditioning system over 290 kW, it should meet the same minimum standards as new non-domestic buildings?**

- a) Yes  
b) No, a different trigger point should be used  
c) No, a different standard should be used  
d) No, for another reason

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

**Question 48): Do you agree with the proposals for requirements relating to the assessment of overall energy performance of building services installations and providing information to building owners for existing non-domestic buildings?**

- a) Yes  
b) No, I do not agree with providing this guidance

**c) No, the guidance should be improved**

**If you answered no (b or c), please explain your reasoning, including any further suggestions.**

**Question 49): 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**

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

**Question 50): 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**

**Please explain your reasoning.**

**Question 51): 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 *Approved Document L, volume 2: buildings other than dwellings*?**

- a) Yes**
- b) No**

**If you answered no, please explain your reasoning.**

**Question 52): Do you agree the Government should continue to provide guidance for minimum building services efficiencies in existing nondomestic buildings, if the standard does not go significantly further than the Ecodesign regulations?**

- a) Yes**
- b) No, the Ecodesign regulations are sufficient**
- c) No**

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

**Question 53): 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 *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**

**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 54): Do you agree that the measures in Tables D.1 and D.2 of Appendix D of *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**

**If you answered no, please explain your reasoning.**

**Question 55): 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**

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

**Question 56): Do you think that the Pulse methodology should be an approved means of demonstrating airtightness for non-domestic buildings?**

- a) Yes**

**b) No**

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

**Question 57): 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.**

**If you answered no, please explain your reasoning.**

**Question 58): 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**

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

**Question 59): Do you agree with the proposed approach to energy sub-metering, as detailed in Section 5 of draft *Approved Document L, volume 2: buildings other than dwellings*?**

- a) Yes**
- b) No**

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

**Question 60):** Do you agree with the proposed approach to energy forecasting, as detailed in paragraph 9.4 of draft *Approved Document L, volume 2: buildings other than dwellings*?

- a) Yes
- b) No, I do not agree with the proposed approach
- c) No, energy forecasting should not form part of the Building Regulations

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

**Question 61):** Do you agree with the proposals for transitional arrangements for buildings other than dwellings?

- a) Yes
- b) No

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

Although we agree with the transitional arrangements, we are unclear on why these differ from the proposed Welsh L & F changes.

## **Interim uplift to Part F standards for non-domestic buildings**

**Question 62):** Do you agree with the proposed guidance in Section 1 and Section 2 of *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**

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

**Question 63): Do you agree with the proposed guidance for reducing noise nuisance for ventilation systems in non-domestic buildings?**

**a) Yes**

**b) No**

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

**Question 64) 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**

**If you answered no, please explain your reasoning.**

**Question 65): 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**

**If you answered no, please explain your reasoning.**

**Question 66): 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**

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

**Question 67): 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**

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

**Question 68): Do you agree with the proposals to simplify, rationalise and clarify the Approved Document guidance in *Approved Document F, volume 2: buildings other than dwellings* as outlined in paragraph 4.3.7 of the consultation document?**

- a) Yes**
- b) No**

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

**Question 69): Do you agree that purge ventilation in offices should be designed to provide at least four air changes per hour?**

**a) Yes**

**b) No, this standard goes too far c) No, this standard does not go far enough**

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

**Question 70): Do you agree with the guidance for the ventilation of car parks and offices, as detailed in Section 1 of *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**

**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 71): 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**

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

**When replacing already draft stripped windows and doors, the replacement windows would not create any need for additional**

ventilation as the air tightness would not be changed. This would also increase the possibility of noise nuisance, additional downdrafts & would have a detrimental effect on the thermal performance as a whole. The decision to increase ventilation through the addition of trickle vents in windows that had no trickle vents fitted would need to be substantiated and not applied carte blanche.

**Question 72): 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*?**

**c) Yes**

**d) No**

If you answered no, please explain your reasoning.

**Question 73): Do you agree with requiring increased capacity of 50% within new ventilation systems in offices shown in paragraph 1.38 of the draft *Approved Document F, volume 2: buildings other than dwellings*?**

**a) Yes**

**b) Yes, but with qualifications c) No, the standard is too high d) No, the standard is too low e) No, I disagree for another reason**

If you answered b, c, d or e, please explain your reasoning.

**Question 74): Do you agree with the proposed standards for provision of outdoor air for offices, shown in paragraphs 1.35 to 1.36 of draft *Approved Document F, volume 2: buildings other than dwellings*?**

**a) Yes**



- b) Yes, but with qualifications
- c) No

If you answered b or c, please explain your reasoning.

**Question 75): 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

If you answered no, please explain your reasoning.

**Question 76): Do you agree with the proposal for indoor air quality monitoring in offices as outlined in paragraphs 1.39 to 1.41 of draft *Approved Document F, volume 2: buildings other than dwellings*?**

- a) Yes
- b) Yes, but with qualifications
- c) No

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

**Question 77): If applicable, please provide any suggestions for guidance for indoor air quality monitoring (e.g. CO<sub>2</sub> monitoring) in non- domestic buildings.**

**Question 78):** Do you agree with the proposals for systems that recirculate air as outlined in paragraph 1.46 of draft *Approved Document F, volume 2: buildings other than dwellings*?

- a) Yes
- b) No

If you answered no, please explain your reasoning.

**Question 79):** Do you agree with the proposed minimum ventilation standard 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

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

**Question 80)** 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

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

## Section B: Domestic Buildings

### Standards for overheating in new residential buildings in 2021

Question 81): How should the Government address the overheating risk?

- a) **Through a new requirement in the Building Regulations and an Approved Document, as proposed in this consultation**
- b) Through Parts L and F of the Building Regulations
- c) Through government guidance
- d) I have an alternative approach
- e) It isn't an issue that needs addressing

Please explain your reasoning and provide suggestions alternative where applicable.

Question 82): Do you agree with the buildings that are in scope of this new part of the Building Regulations?

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

Please explain your reasoning.

Question 83): Do you agree that the division of England based on overheating risk detailed in paragraph 5.6.3 of this consultation document is correct?

- a) **Yes**
- b) No, there should be one area
- c) No, there should be more areas

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

The area of greater London includes many parts that are not high rise built up areas. Due to the increased complexity for installers and differing specifications e.g. smaller windows with greater shading and possibly solar control glass, all of which would lead to less solar energy and daylight entering the building should the area considered be reduced to the Central London area?

**Question 84): Do you agree with the categorisation of buildings into Group A and Group B as detailed in paragraph 5.6.5 of this consultation document?**

**a) Yes**

**b) No**

If you answered no, please explain how buildings should be re-categorised.

**Question 85): Do you agree with the simplified method as a means of compliance with the proposed new requirement to reduce overheating risk?**

**a) Yes**

**b) No, the method should be more sophisticated**

**c) No, the method is too easy to pass**

**d) No, for another reason**

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

**Question 86)** Do you agree with the maximum glazing area and shading standards for limiting solar gains in the simplified method as detailed in paragraphs 1.6 to 1.9 of the draft *Overheating Approved Document*?

a) Yes

b) No

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

[See comment on Question 88](#)

**Question 87)** Do you agree with the approach to removing excess heat in the simplified method as detailed in paragraphs 1.10 to 1.13 of the draft *Overheating Approved Document*?

a) Yes

b) No

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

**Question 88):** Do you think that adequate levels of daylight will be provided and that homes will be acceptable to purchasers while meeting these proposed standards?

a) Yes

b) No

Please explain your reasoning.

A limit on glazing area and a lower g value will lead, in some cases to daylight being reduced significantly. The impacts on daily living and general wellbeing could be more detrimental than overheating. We propose that a minimum glazed area also be

introduced to mitigate the risk of lost daylight to occupants. Also part 4.82 of the impact assessment document acknowledges the fact that the proposals do not take into account the lost amenity from a reduction in glazing; flats are highly glazed because purchasers value large windows. Studies have been carried out on the benefits of daylight to occupants and the below are extracts from [Ref: *The distinctive benefits of glazing – The social and economic contributions of glazed areas to sustainability in the built environment* - David Strong Consulting, 2012]

*Numerous research studies have demonstrated that glazing in residential buildings has a profound impact on human health, happiness and, with increasing numbers of people working from home, productivity. These include:*

- quality of life, happiness and a sense of well-being*
- health*
- ability to learn (related to learning at home)*
- productivity (related to working from home)*
- ability to carry out tasks*
- visual connection to the outside*

*Natural light is rich in the spectral qualities of daylight which research has found to be essential in stimulating the production of serotonin, without which humans can suffer from depression, anxiety, pain perception and aggressive behaviour.*

Question 89): Do you agree with offering dynamic thermal analysis as a means of compliance with the proposed new requirement to reduce overheating risk?

- a) Yes, as described in the draft *Overheating Approved Document*
- b) Yes, but not as described in the draft *Overheating Approved Document*
- c) No

Please explain your reasoning and provide alternative suggestions where applicable.

**Question 90):** Please detail any information you have about the likelihood of occupants opening doors and windows at night in unoccupied rooms.

The use of trickle vents covered elsewhere in the consultation is to take the responsibility of ventilation away from the occupier yet this proposal puts the onus on controlling ventilation back on to the occupier. This is also unlikely due to security concerns and insurance implications if the building is unoccupied.

**Question 91):** Do you agree with the proposed acceptable strategies for shading and the removal of excess heat, when following the dynamic thermal analysis method, as found in Section 2 of the draft *Overheating Approved Document*?

- a) **Yes, I agree with both sets of acceptable strategies**
- b) Yes, but with amendments to the acceptable shading strategies
- c) Yes, but with amendments to the acceptable strategies to remove excess heat
- d) Yes, but with amendments to both sets of acceptable strategies
- e) No, I do not agree with the acceptable strategies

Please explain your reasoning and provide any suggested amendments where applicable.

Further feedback on the Dynamic Thermal method has been requested from members and would the use of this method be mandatory at the design stage for particular building types and location.

**Question 92):** Do you agree that the overheating standard should not account for the effect of curtains, blinds and tree cover?

- a) **Yes, curtains, blinds and tree cover should be excluded**
- b) Yes, but only curtains and blinds should be excluded
- c) Yes, but only tree cover should be excluded
- d) No, none of these should be excluded

If you answered b, c or d, please explain your reasoning.

**Has consideration been given to the use of Insulated Glass units which incorporate integral blinds which cannot be removed.**

**Question 93): Do you agree that the building should be constructed to meet the overheating requirement without the need for mechanical cooling?**

- a) Yes**
- b) No**

**If you answered no, please explain your reasoning.**

**Question 94): Do you agree with limiting noise in new residential buildings when the overheating strategy is in use, and the proposed guidance in Section 3 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**

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

**Concerns over how it could be achieved. Open windows as part of the overheating strategy will allow unwanted noise to enter. Particularly problematic when trying to sleep. A large proportion of the population work shift patterns meaning they need to sleep during the day.**

**Question 95): Do you agree with minimising the ingress of external pollutants when the overheating strategy is in use, and that the external pollutants guidance in *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

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

Concerns over how it could be achieved. Open windows as part of the overheating strategy will allow pollutants to enter.

**Question 96): Do you agree with the proposals on security in Section 3 of the draft *Overheating Approved Document* in new residential buildings?**

a) Yes

b) No

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

The requirement for railings will reduce the light into the rooms, could lead to lights being used during the day. Also concerns raised over fire escape openings being compromised by railings. Windows open on restrictor devices will not provide the security needed. No means of security testing restrictors in the open position. Conflicts with PAS24.

**Question 97): Do you agree with the protection from falling guidance proposed in Section 3 of the draft *Overheating Approved Document*?**

a) Yes

b) No

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

Although agree in principal the result may be smaller windows, leading to less light and possibly more windows required. See detail from question 88

Question 98): Do you agree with the guidance on protection from entrapment proposed in Section 3 of the draft *Overheating Approved Document*?

- a) Yes
- b) No

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

Agree with the need to prevent entrapment but railings and guarding would further reduce the daylight.

Question 99): Are there any further issues which affect usability that should be included in the *Overheating Approved Document*?

- a) Yes
- b) No

Please explain your reasoning and provide supporting evidence.

Question 100): Do you agree with the proposed requirement to provide information on the overheating strategy to the building owner?

- a) Yes, I agree with the requirement, the list provided and that this should be within a Home User Guide
- b) Yes, I agree with the requirement, but think that the list provided should be changed or that this should not be provided within a Home User Guide
- c) No, I do not agree with providing information

Please explain your reasoning and provide alternative suggestions where applicable.

The building owner will not always be the occupier. The occupier should receive the information also.

**Question 101): How do you see this new Building Regulation interacting with policies in local plans?**

**There will be some conflict in conservation areas and we need further guidance for this. For example will the local Conservation Officer make the final decision and if not who does.**

**Question 102): Do you agree that this guidance on limiting the effects of heat gains in summer, in both Approved Document L guidance for new dwellings and SAP Appendix P, can be removed?**

**a) Yes**

**b) No**

**If you answered no, please explain your reasoning.**

**Question 103): Should the transitional arrangements that apply to the overheating requirements align with the proposed transitional arrangements for Part L and F 2021 for new dwellings, as described in paragraph 5.10.2 of this consultation document?**

**a) Yes**

**b) No**

**Please explain your reasoning and provide alternative suggestions where applicable. If you answered no, please also propose an alternative reasonable period that could apply.**

## Part L standards for domestic buildings in 2021

Question 104): Do you agree with the proposed minimum fabric standards for existing domestic buildings set out in Table 6.1 of this consultation document?

a) Yes

b) No

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

Concern raised about the relationship between Part L and Approved Document for overheating. Part L has energy ratings included that will not be achievable where g value glass of 0.4 is used for the shading requirement of overheating in Greater London. This will pose a problem when these windows come to be replaced in the future.

Question 105): Do you agree with the draft guidance in section 4 of the draft *Approved Document L, volume 1: dwellings* on reducing unwanted air infiltration when carrying out work to existing homes?

a) Yes

b) No

If you answered no, please explain your reasoning.

Question 106): Do you agree that we should control the primary energy and fabric energy efficiency of new extensions to existing homes when using the SAP method of compliance?

a) Yes

b) No

Concern raised about restricting the glazing area to 25%. Will this be based on the new overall floor area i.e. existing floor area plus extension floor area.

If you answered no, please explain your reasoning.

**Question 107): Do you agree that the limiting U-value for rooflights in existing domestic buildings should be based on a rooflight in a horizontal position, as detailed in Section 4 of draft *Approved Document L, volume 1: dwellings*?**

a) Yes

b) No

If you answered no, please explain your reasoning.

**Question 108): Do you agree that we should adopt the latest version of BR 443 for calculating U-values in existing domestic buildings, as detailed in Section 4 of draft *Approved Document L, volume 1: dwellings*?**

a) Yes

b) No

If you answered no, please explain your reasoning. It does not include the window configuration, only the size.

**Question 109): Do you agree with the proposed minimum fabric standards set out in Table 6.2 of this consultation document, and Sections 4 and 11 of draft *Approved Document L, volume 1: dwellings*?**

a) Yes

b) No

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

**Question 110): What level of FEES should be used for Part L 2021?**

- a) Option 1, full fabric specification
- b) **Option 2, fabric specification x1.15**
- c) Neither, it should be higher
- d) Neither, it should be lower

**Please explain your reasoning and provide supporting evidence, including whether you think a higher level of FEES will make it more or less likely for a home to be built with low carbon heat.**

Windows and doors: X 1.15 leaves room for a range between 1.2 and 1.4 U value, option 1 will result in all being 1.2 U value. Industry not ready for 1.2 across the board.

**Question 111): Do you agree that we have adequately covered matters which are currently in the Domestic Building Services Compliance Guide in draft *Approved Document L, volume 1: dwellings* for existing homes?**

- a) Yes
- b) No

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

**Question 112): Do you agree with the proposed minimum standards for building services in existing homes, as detailed in Sections 5 and 6 of draft *Approved Document L, volume 1: dwellings*?**

- a) Yes
- b) No, the standards go too far
- c) No, the standards do not go far enough

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

**Question 113): Do you agree with the proposals for replacement fixed building services in existing homes, as detailed in Section 5 of draft *Approved Document L, volume 1: dwellings*?**

- a) Yes**
- b) No**

**If you answered no, please explain your reasoning.**

**Question 114): Do you agree with our proposed approach to mandating self-regulating controls in existing domestic buildings, including technical and economic feasibility, as detailed in Sections 5 and 6 of draft *Approved Document L, volume 1: dwellings*?**

- a) Yes**
- b) No**

**If you answered no, please explain your reasoning.**

**Question 115): Do you agree with the proposed specifications for building automation and control systems installed in a new or existing home, as detailed in Section 6 of *draft Approved Document L, volume 1: dwellings*?**

- a) Yes**
- b) No**

**If you answered no, please explain your reasoning.**

**Question 116): Do you agree with the proposals for extending commissioning requirements to Building Automation and Control Systems and**

on-site electricity generation systems, as detailed in Sections 8 and 9 of draft *Approved Document L, volume 1: dwellings*?

- a) Yes
- b) No

If you answered no, please explain your reasoning.

**Question 117):** Do you agree with the proposals for requirements relating to the assessment of overall energy performance of building services installations and providing information to homeowners, as detailed in Sections 8 and 9 of draft *Approved Document L, volume 1: dwellings*?

- a) Yes
- b) No, I do not agree with providing this guidance
- c) No, the guidance should be improved

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

**Question 118):** Do you agree with the proposed changes to water treatment guidance and removing formal guidance on water softening?

- a) Yes
- b) No

If you answered no, please explain your reasoning.

**Question 119):** Do you agree with the guidance proposals for adequate sizing and controls of building services systems in domestic buildings, as detailed in Sections 5 and 6 of draft *Approved Document L, volume 1: dwellings*?

- a) Yes



- b) No, I do not agree with providing this guidance
- c) No, the guidance should be improved

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

**Question 120): Do you agree with the guidance proposals on sizing a system to run at 55°C when a whole heating system is replaced, as detailed in Section 5 of draft *Approved Document L, volume 1: dwellings*?**

- a) Yes
- b) No, I do not agree with providing this guidance
- c) No, the guidance should be improved

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

**Question 121): Do you agree with the proposed changes to the supplementary guidance and the external references in Appendix D and Appendix E, in the draft *Approved Document L, volume 1: dwellings* as outlined in paragraph 6.8.2.?**

- a) Yes
- b) Yes, but not with the changes to the supplementary guidance
- c) Yes, but not with the external references
- d) No

If you answered b, c or d, please explain your reasoning.

**Question 122): Do you agree with the proposal for guidance on the calibration of devices that carry out airtightness testing in new and existing domestic buildings?**

- a) Yes
- b) No

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

## **Part F standards for existing domestic buildings in 2021**

**Question 123): Do you agree that we have adequately covered matters for existing dwellings which are currently in the Domestic Ventilation Compliance Guide in draft *Approved Document F, volume 1: dwellings*?**

- a) Yes**
- b) No**

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

**Question 124): Do you agree with the proposed changes to supplementary guidance and the external references used in Appendix E and Appendix F, for existing domestic buildings from the draft *Approved Document F, volume 1: dwellings*?**

- a) Yes**
- b) Yes, but not with the changes to the supplementary guidance**
- c) Yes, but not with the external references**
- d) No**

If you answered b, c or d, please explain your reasoning.

**Question 125): Do you agree with the proposal to align the guidance and standards for work to existing homes to that outlined in Chapter 4 of the Government Response to the Future Homes Standard consultation?**

- a) Yes**
- b) No**

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

**Question 126): Do you agree with the proposed guidance for installing energy efficiency measures in existing homes, as detailed in Section 3 of draft *Approved Document F, volume 1: dwellings*.**

**a) Yes**

**b) No**

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

**Question 127): Do you agree with the content of the proposed checklist for ventilation provision detailed in Appendix D of draft *Approved Document F, volume 1: dwellings*?**

**a) Yes**

**b) No**

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

**Question 128): Do you agree with the guidance in Section 3 of draft *Approved Document F, volume 1: dwellings* when replacing an existing window with no background ventilators?**

**a) Yes**

**b) No, the standards go too far**

**c) No, the standards do not go far enough**

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

Some members expressed concern over the required ea mm<sup>2</sup> of ventilation. The industry advice we have is that multiples of 2500ea mm<sup>2</sup> is easier to achieve.

When replacing already draft stripped windows and doors, the replacement windows would not create any need for additional ventilation as the air tightness would not be changed. This would also increase the possibility of noise nuisance, additional downdrafts & would have a detrimental effect on the thermal performance as a whole. The decision to increase ventilation through the addition of trickle vents in windows that had no trickle vents fitted would need to be substantiated and not applied carte blanche.

**Question 129): Do you agree with the proposals in paragraphs 3.29 to 3.31 of draft *Approved Document F, volume 1: dwellings* in 7.4.11 of this consultation document on work to existing kitchens or bathrooms?**

- a) Yes**
- b) No, the standards go too far**
- c) No, the standards do not go far enough**

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

**Question 130): Do you agree with the proposal to provide a completed commissioning sheet to the homeowner, as detailed in Section 4 of draft *Approved Document F volume 1: dwellings*?**

- a) Yes**
- b) No**

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

## Impact and Equalities Assessment

**Question 131): 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.**

**Question 132): Please provide any feedback you have on the potential impact of the proposals outlined in this consultation document on persons who have a protected characteristic. Please provide evidence to support your comments.**