

Draft



Consultation Response

**The Future Homes and Buildings
Standards: 2023 consultation**

Prepared for: DLUHC

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**elmhurst
energy**

1. Introduction

Elmhurst Energy are pleased that **DLUHC**, are seeking a call for evidence on The Future Homes and Buildings Standards: 2023 consultation and as such we are delighted to respond to each question in turn.

The consultation asked **95** questions and we have answered them all below. We hope you find the responses considered and useful for taking **The Future Homes and Buildings Standards: 2023 consultation** forward in a progressive manner.

2. Questions and Answers

1. Scope of Consultation

Question 1. Are you responding as / on behalf of (select all that apply):

Energy Assessor Certification Scheme

Question 2. If you are responding as a member of the public/ a building professional, what region are you responding from?

n/a

Question 3. If you are responding as a member of the public, are you a:

n/a

Question 4. If you are responding on behalf of a business/ organisation, what is the name of your business/organisation?

Elmhurst Energy

Question 5. If you are responding on behalf of a business/ organisation, where is your business/organisation based/registered?

Cover all regions

Question 6. When you respond it would be useful if you can confirm whether you are replying as an individual or submitting an official response on behalf of an organisation and include: your name, your position (if applicable), the name of organisation (if applicable), an address (including post-code), an email address, and a contact telephone number. (Your personal data is being collected so that we can contact you regarding your response and for statistical purposes, an essential part of the consultation process. We may also use it to contact you about related matters. Please see the Privacy Notice in Annex A of the consultation paper for further information on how we use this data.)

Submitting an official response on behalf of an organisation.

2. Acronyms

Section 2 'Acronyms' of the consultation paper does not include any questions. Please proceed to the next page of the survey.

3. Introduction

Section 3 'Introduction' of the consultation paper does not include any questions. Please proceed to the next page of the survey.

4. Performance requirements for new buildings

Question 7. Which option for the dwelling notional buildings (for dwellings not connected to heat networks) set out in The Future Homes Standard 2025: dwelling notional buildings for consultation do you prefer?

- a. Option 1 (higher carbon and bill savings, higher capital cost).**
- b. Option 2 (lower carbon savings, increase in bill costs, lower capital cost)

Question 8. What are your priorities for the new specification? (select all that apply)

low capital cost

lower bills

carbon savings

other (please provide further information)

Please provide any additional comments to support your view on the notional building for dwellings not connected to heat networks

Elmhurst has selected option 1 as the specification that should be used for setting the performance standards. Whilst we agree that both options will result in carbon savings, we do not believe option 2 is an acceptable position for setting the standards as it will increase fuel bills compared to a Part L 2021 dwelling. If the government chooses Option 2 then this will be the first time ever that a change to the energy efficiency standards within the building regulations results in an increase to householder's bills compared to the previous regulations, and at £580 per year, the increase is not small, in fact it nearly doubles the regulated energy bill compared to new homes being built to Part L 2021. The consultation states that one of the priorities for the Future Homes Standard is protecting occupants from high energy bills, so as a result we believe option 2 is unviable for setting the performance standards.

Elmhurst believes that homes built to the Future Homes Standard should have renewable technologies installed. The reasons for this include to protect occupant against fuel bills particularly with the move to electrification of heating, reduce demand on the national grid and also would support the use of EVs. Many homes being built under Part L 2021 include photovoltaic panels therefore to adopt an option that would could reduce the presence of renewable energy on new homes would be seen as a step backwards in energy efficiency requirements.

Question 9. Which option for the dwelling notional buildings for dwellings connected to heat networks set out in The Future Homes Standard 2025: dwelling notional buildings for consultation do you prefer?

- a. Option 1 (higher carbon and bill savings, higher capital cost)**
- b. Option 2 (lower carbon savings, increase in bill costs, lower capital cost)

Please provide any additional comments on the specification of the heat network in the notional building.

n/a

Question 10. Which option do you prefer for the proposed non-domestic notional buildings set out in the NCM modelling guide?

- a. Option 1**
 - 40% P.V. Side lit**
 - 75% P.V. top lit**
- b. Option 2
 - 20% P.V. Side lit
 - 40% P.V. top lit

Question 11. What are your priorities for the new specification?

low capital cost

lower bills

carbon savings

other (please provide further information)

Please provide additional information to support your view on the proposed non-domestic notional buildings set out in the National Calculation Methodology modelling guide.

Please refer to answer provided in Question 8.

5. Metrics

This page of survey questions relates to Section 5 'Metrics' of the consultation paper.

Question 12. Do you agree that the metrics suggested in Section 5 'Metrics' of the consultation paper (TER, TPER and FEE) should be used to set performance requirements for the Future Homes and Buildings Standards?

- a. Yes
- b. Yes, and I want to provide views on the suitability of these metrics and/or their alternatives**
- c. No, I think delivered energy should be used
- d. No, I think FEE should be changed
- e. No, for another reason (please provide justification)

If you selected answer options b or e, please provide further information here.

Elmhurst agree with the primary energy, carbon and fabric energy efficiency metrics proposed. These metrics are understood by industry as have been used in Part L 2021, and in the case of carbon and fabric energy efficiency, since Part L 2013. Retaining these metrics allows comparison between different versions of Building Regulations and should result in buildings that are low carbon, low energy and low fuel bills. The way forward 'three Cs': energy consumption, energy cost, and carbon emissions. The national calculation methodologies (SAP for homes and SBEM for nondomestic buildings) can present all three metrics and we believe all three should be illustrated in the EPC. Every environmental policy and regulatory campaign can then align to one or more of those metrics, and we can measure progress more easily.

6. Updated guidance and minimum standards

This page of survey questions relates to Section 6 'Updated guidance and minimum standards' of the consultation paper.

Question 13. Do you agree with the proposed changes to minimum building services efficiencies and controls set out in Section 6 of draft Approved Document L, Volume 1: Dwellings?

- a. Yes**
- b. Yes, and I want to provide additional suggestions or information to support my view
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

n/a

Question 14. Do you agree with the proposal to include additional guidance around heat pump controls for homes, as set out in Section 6 of draft Approved Document L, Volume 1: Dwellings?

- a. Yes**
- b. Yes, and I want to provide additional suggestions or information to support my view
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

n/a

Question 15. Do you agree that operating and maintenance information should be fixed to heat pump units in new homes?

- a. Yes**
- b. Yes, and I want to provide additional suggestions or information to support my view
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

n/a

Question 16. Do you think that the operating and maintenance information set out in Section 10 of draft Approved Document L, Volume 1: Dwellings is sufficient to ensure that heat pumps are operated and maintained correctly?

- a. Yes**
- b. Yes, and I want to provide additional suggestions or information to support my view
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

n/a

Question 17. Do you agree with the proposed changes to Section 4 of draft Approved Document L, Volume 1: Dwellings, designed to limit heat loss from low carbon heating systems?

- a. Yes**
- b. Yes, and I want to provide additional suggestions or information to support my view
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

n/a

Question 18. Do you agree with the proposed sizing methodology for hot water storage vessels for new homes?

- a. Yes**
- b. Yes, and I want to provide additional suggestions or information to support my view
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

Elmhurst have no expertise in this area.

Question 19. Do you agree with the proposed changes to minimum building services efficiencies and controls set out in Section 6 of draft Approved Document L, Volume 2: Buildings other than dwellings?

- a. Yes
- b. Yes, and I want to provide additional suggestions or information to support my view.**
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

We agree with the proposed changes to building services. Elmhurst would also suggest consideration is given to the introduction of an Air Conditioning scheme for domestic buildings. A methodology and scheme currently exists for AC systems in Non-Domestic buildings, which could easily be amended to make appropriate for systems in domestic buildings.

Question 20. Do you agree with the proposed guidance on the insulation standard for building heat distribution systems in Approved Document L, Volume 2: Buildings other than dwellings?

- a. Yes**
- b. Yes, and I want to provide additional suggestions or information to support my view
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

n/a

Question 21. Do you agree that the current guidance for buildings with low energy demand which are not exempt from the Building Regulations, as described in Approved Document L, Volume 2: Buildings other than dwellings should be retained without amendment?

- a. Yes
- b. Yes, and I want to provide additional suggestions or information to support my view**
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

Elmhurst's view is that all buildings irrespective of being low energy demand or not should have to comply with regulations, and there should be no exemptions for unoccupied buildings.

Question 22. Do you agree that lifts, escalators and moving walkways in new buildings (but not when installed within a dwelling) should be included in the definition of fixed building services?

- a. Yes
- b. Yes, and I want to provide additional suggestions or information to support my view**
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

Elmhurst agrees that these building services should be included in more detail in the calculation. These areas would need to be given recognised activity types within the NCM in order that they can be accounted for properly by assessors.

Question 23. Do you agree with the proposed guidance for passenger lifts, escalators and moving walkways in draft Approved Document L, Volume 2: Buildings other than dwellings?

- a. Yes**
- b. Yes, and I want to provide additional suggestions or information to support my view
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

n/a

Question 24. Do you have any further comments on any other changes to the proposed guidance in draft Approved Document L, Volume 2: Buildings other than dwellings?

- a. Yes (please provide comments)
- b. No**

If you selected answer option a, please provide comments here.

n/a

7. Material Change of Use

This page of survey questions relates to Section 7 'Material Change of Use' of the consultation paper.

Question 25. Should we set whole-building standards for dwellings created through a material change of use?

- a. Yes
- b. No, an elemental standard should be set with an option to use a notional building if the designer prefers
- c. No, for another reason (please provide justification)

If you selected answer option c, please provide further information here.

n/a

Question 26. Should the proposed new MCU standard apply to the same types of conversion as are already listed in Approved Document L, Volume 1: Dwellings?

- a. Yes
- b. No, standards should also apply to non-dwelling accommodation e.g., student or patient accommodation, care homes, and hotels
- c. No, the standard should be clearer that it applies to houses of multiple occupation (please recommend specific building types you think the standard should apply to and provide justification)
- d. No, for another reason (please provide justification)

If you selected answer option c or d, please provide further information here.

Elmhurst believes any type of material change of use, whether 'domestic' or 'non domestic' and including HMO's should be subject to some level of energy efficiency standards. We cannot see a reason why any type of MCU would be fully excluded.

Question 27. Should different categories of MCU buildings be subject to different requirements?

- a. Yes
- b. No (please provide justification)**

If you selected answer option b, please provide further information here.

Elmhurst believes believe all types of MCU should be subject to the same energy efficiency standards.

Question 28. Which factors should be taken into account when defining building categories? (check all those that apply)

height of the building, i.e., low versus mid- to high-rise buildings.

floor area of the building

the expertise of those carrying out the work

whether the conversion is a part- or whole-building conversion

Other (please state)

Please provide additional information to support your view.

As with question 28, Elmhurst believes the standards should be taken into account for all categories.

Question 29. Do you agree with the illustrative energy efficiency requirements and proposed notional building specifications for MCU buildings?

a. Yes

b. No

Question 30. If you answered no to the previous question, please provide additional information to support your view. Select all that apply. The requirements are: N/A

too stretching

not stretching enough

not economically viable

not practical/technically feasible

other (please provide further details)

If you selected answer option "other", please provide further information here.

n/a

Question 31. Do you agree with using the metrics of primary energy rate, emission rate and fabric energy efficiency rate, if we move to whole dwelling standards for MCU buildings?

a. Yes

b. Yes, and I want to provide additional suggestions or information to support my view

c. No (please provide justification)

If you selected answer option b or c, please provide further information here.

Elmhurst believes using the same metrics as for new dwellings would be easier for the industry to understand and also allow comparison against the performance of new dwellings.

Question 32. Under what circumstances should building control bodies be allowed to relax an MCU standard?

- a. None, building control bodies should not be able to relax MCU standards
- b. Building control bodies should be able to relax under the following circumstances (please provide further details)**

If you selected answer option b, please provide further information here.

Where a MCU is a listed building, or in a conservation area, it may not be possible to meet the standards. In these cases a relaxation may be applied but on the basis that all efforts have been made to improve the building as far as possible.

Question 33. Do you have views on how we can ensure any relaxation is applied appropriately and consistently? Please select all that apply:

there should be guidance on circumstances where relaxation of the notional standard may be appropriate

there should be monitoring of how relaxation is applied

only formal relaxation or dispensation through the local authority should be possible

other (please provide further details)

If you selected answer option "other", please provide further information here.

n/a

Question 34. Should a limiting standard be retained for MCU dwellings?

- a. Yes (please provide further details)**
- b. No, it is too strict
- c. No, it is not strict enough
- d. No, there is not enough information
- e. No, for another reason (please provide further details)

If you selected answer option a or e, please provide further information here.

The whole dwelling performance standards do allow a degree of tradability in terms of performance so it is vital to have absolute limiting standards to avoid any unintended consequences.

Question 35. If a limiting standard is retained, what should the limiting standard safeguard against? Please select all that apply:

risk of moisture, damp and mould

high energy demand and energy bills (please provide recommended values referring to ADL volume 1 Table 4.3)

other (please provide further details)

If you selected "high energy demand and energy bills" or "other", please provide further information here.

n/a

Question 36. Do you wish to provide any evidence on the impacts of these proposals including on viability?

a. Yes (please provide evidence)

b. No

If you selected answer option a, please provide further information here.

n/a

Question 37. Do you agree that a BREL report should be provided to building control bodies if we move to energy modelling to demonstrate compliance with MCU standards

a. Yes

b. Yes, and photographic evidence is needed

c. Yes, and I'd like to provide further information

d. No (please provide justification)

If you selected answer options c or d, please provide further information here.

Elmhurst believes the BREL report and photographic evidence should be required for MCU. We would recommend the BREL for MCUs is clearly formatted so as to be obvious it is applying different compliance standards to that of a new dwelling.

In regards to photographic evidence the current requirements in Appendix B would need to be reviewed as to whether they can fully apply to an MCU. For example photographs of some junctions may not be possible to obtain in an MCU.

Question 38. Do you agree that consumers buying homes created through a material change of use should be provided with a Home User Guide when they move in?

a. Yes

b. Yes, and I'd like to provide further information

c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

n/a

Question 39. Do you agree that homes that have undergone an MCU should be airtightness tested?

a. Yes

b. Yes, and I'd like to provide further information

c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

If you selected answer options b or c, please provide further information here.

Elmhurst believes that all MCUs should be subject to an airtightness test from a member of a recognised competent persons scheme.

8. Real-world performance of homes

This page of survey questions relates to Section 8 'Real-world performance of homes' of the consultation paper.

Question 40. Do you think that we should introduce voluntary post occupancy performance testing for new homes?

a. Yes

b. Yes, and I'd like to provide further information

c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

Elmhurst agrees that post occupancy performance testing should be used to validate the performance of new homes – however this should not be voluntary it should be mandatory. Post occupancy performance testing should only be undertaken by members of a competency scheme and in accordance with the relevant standard. Elmhurst have competency schemes for measured U values, Measured Energy Performance (HTC values), Air Tightness Testing, Background ventilation testing, and more all of which contribute to measuring actual post occupancy performance in a building.

Question 41. Do you think that the government should introduce a government-endorsed Future Homes Standard brand? And do you agree permission to use a government-endorsed Future Homes Standard brand should only be granted if a developer's homes perform well when performance tested? Please include any potential risks you foresee in your answer.

a. Yes

b. Yes, and I want to provide additional suggestions or information

c. Yes, but I think there are risks associated with introducing a government-endorsed brand

d. No (please provide justification)

If you selected answer options b or d, please provide further information here.

n/a

Question 42. Do you agree with the proposed changes to Approved Document F, Volume 1: Dwellings to improve the installation and commissioning of ventilation systems in new and existing homes?

a. Yes

b. Yes, and I'd like to provide further information

c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

Yes the Government should insist on the independent testing by a member of a recognised competent persons scheme of any new ventilation systems to ensure adequate design and functioning and this should be presented to the building owner, and the occupants.

Question 43. Do you agree with the proposal to extend Regulation 42 to the installation of mechanical ventilation in existing homes as well as new homes?

a. Yes

b. Yes, and I'd like to provide further information

c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

Yes the Government should insist on the independent testing by a member of a competent persons scheme of any new ventilation systems to ensure adequate design and functioning and this should be presented to the building owner, and the occupants.

There may be scenarios where energy efficiency measures are retrofit to an existing home and Part F would require new ventilation to be installed. However an alternative approach has been developed by the Insulation Assurance Authority and approved by Trustmark for use in PAS 2035 known as

'Background Ventilation Assessment of Existing Dwellings'. The process is similar to airtightness testing and individuals who operate to this standard have to be suitably trained and members of a competency scheme. Scheme members are subject to annual surveillance, equipment checks and CPD requirements.

Elmhurst recommends this process is formally recognised in Building Regulations, specifically Approved Document F where work on existing homes is carried out.

Question 44. Do you think the guidance on commissioning hot water storage vessels in Section 8 of draft Approved Document L, Volume 1: Dwellings is sufficient to ensure they are commissioned correctly? – No strong opinion

- a. Yes
- b. Yes, and I'd like to provide further information
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

No strong opinion

Question 45. Are you aware of any gaps in our guidance around commissioning heat pumps, or any third-party guidance we could usefully reference? – No strong opinion

- a. Yes (please provide further details)
- b. No

If you selected answer option a, please provide further information here.

No strong opinion

Question 46. Do you think the guidance for commissioning on-site electrical storage systems in Section 8 of draft Approved Document L, Volume 1: Dwellings is sufficient to ensure they are commissioned correctly? – No Strong Opinion

- a. Yes
- b. Yes, and I'd like to provide further information
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

No strong opinion

Question 47. Do you agree with proposed changes to Approved Document L, Volume 1: Dwellings and Approved Document F, Volume 1: Dwellings to (a) clarify the options for certifying fixed building services installations and (b) set out available enforcement options where work does not meet the required standard?

- a. Yes**
- b. Yes, and I'd like to provide further information
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

n/a

Question 48. Do you think the additional information we intend to add to the Home User Guide template, outlined above, is sufficient to ensure home occupants can use their heat pumps efficiently?

- a. Yes**
- b. Yes, and I'd like to provide further information
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

n/a

Question 49. If you are a domestic developer, do you use, or are you planning to use, the Home User Guide template when building homes to the 2021 uplift? Please give reasons in your response. – N/A

a. Yes (please provide further details)

b. No (please provide further details)

Please provide further details here.

n/a

Question 50. Do you have a view on how Home User Guides could be made more useful and accessible for homeowners and occupants, including on the merits of requiring developers to make guides available digitally? Please provide evidence where possible.

a. Yes, (please provide further details)

b. No

If you selected answer option a, please provide further information here.

Elmhurst believes the Home User Guide should be provided digitally to occupants. The HUG should be linked to the EPC Register so the occupant has one location where they can go and get all the information they would need to understand their home and its components.

Question 51. Do you think that there are issues with compliance with Regulations 39, 40, 40A and 40B of the Building Regulations 2010? Please provide evidence with your answer.

a. Yes (please provide justification)

b. No (please provide justification)

Please provide justification here.

Elmhurst believes there are compliance issues in relation to the listed Regulations, but has no formal evidence available to provide.

Question 52. Do you think that local authorities should be required to ensure that information required under Regulations 39, 40, 40A and 40B of the Building Regulations 2010 has been given to the homeowner before issuing a completion certificate?

a. Yes

- b. Yes, and I'd like to provide further information
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

n/a

9. Heat Networks

This page of survey questions relates to Section 9 'Heat Networks' of the consultation paper.

Question 53. Do you agree that new homes and new non-domestic buildings should be permitted to connect to heat networks, if those networks can demonstrate they have sufficient low-carbon generation to supply the buildings' heat and hot water demand at the target CO₂ levels for the Future Homes or Buildings Standard?

a. Yes

b. Yes, and I'd like to provide further information

c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

n/a

Question 54. Do you agree that newly constructed district heating networks (i.e., those built after the Future Homes and Buildings Standard comes into force) should also be able to connect to new buildings using the sleeving methodology?

a. Yes

b. Yes, and I'd like to provide further information

c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

Question 55. Do you agree with the proposed guidance on sleeving outlined for Heat Networks included in Approved Document L, Volume 1: Dwellings and Approved Document L, Volume 2: Buildings other than dwellings?

a. Yes

b. Yes, and I'd like to provide further information

c. No (please provide justification)

If you selected answer options b or c, please provide further information here

n/a

Question 56. Do you agree that heat networks' available capacity that does not meet a low carbon standard should not be able to supply heat to new buildings?

a. Yes

b. No (please provide further details regarding how this unused higher carbon capacity should be accounted for)

If you selected answer option b, please provide further information here.

n/a

Question 57. What are your views on how to ensure low-carbon heat is used in practice?

Not sure how we would like to answer this question

Question 58. Are there alternative arrangements for heat networks under the Future Homes and Building Standards that you believe would better support the expansion and decarbonisation of heat networks?

Elmhurst has no strong opinion on this.

10. Smart Meters

This page of survey questions relates to Section 10 'Smart Meters' of the consultation paper.

Question 59. Do you agree that the draft guidance provides effective advice to support a successful smart meter installation in a new home, appropriate to an audience of developers and site managers?

a. Yes

b. No

If not, please provide suggestions for how the draft guidance could be improved. Please provide evidence and sources for your statements where appropriate.

n/a

Question 60. Do you agree that voluntary guidance referenced in draft Approved Document L, Volume 1: Dwellings is the best approach to encouraging smart meters to be fitted in all new domestic properties?

a. Yes

b. No

If not, is there anything else you think the government should be doing to ensure that smart meters are fitted in all new build properties?

n/a

11. Accounting for exceptional circumstances

This page of survey questions relates to Section 11 'Accounting for exceptional circumstances' of the consultation paper.

Question 61. Do you agree that it should be possible for Regulation 26 (CO2 emission rates) to be relaxed or dispensed with if, following an application, the local authority or Building Safety Regulator concludes those standards are unreasonable in the circumstances?

a. Yes

b. No (please provide justification)

If you selected answer option b, please provide further information here.

Elmhurst does not agree with the proposal to allow a relaxation of Regulation 26. We believe this would be an option that could be abused by developers who will apply where, in their view, compliance with the standards may be deemed too difficult. For example, for certain dwelling designs where developers may argue that it is not possible to install the amount of PV required to achieve the TER. However, this shortfall in performance should be able to be made up elsewhere and compliance achieved. It is likely this would be significant pressure onto local authorities who are already enforcing many other complex areas of Building Regulations.

Question 62. If you responded yes to the previous question, please share any examples of circumstances where you think it may be reasonable for a local authority to grant a relaxation or dispensation.

Please share any examples here.

No response required.

Question 63. Do you think that local authorities should be required to submit the applications they receive, the decisions they make and their reasoning if requested?

a. Yes

b. Yes, and I'd like to provide further information

c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

Elmhurst believes that where a relaxation is granted then the reasons for this decision should be made public by the local authority. This would result in transparency and also ensure relaxations are applied on a consistent basis across the country.

Question 64. Are there any additional safeguards you think should be put in place to ensure consistent and proportionate use of this power?

Please provide any comments here.

Elmhurst believes there needs to be a definitive list of scenarios where a relaxation could be applied. We have already heard anecdotal evidence of developers planning to use this to apply for a relaxation where a dwelling design is deemed too difficult to achieve the TER for, which we believe is not the Government's intention for this option.

12. Legislative changes to the energy efficiency requirements

This page of survey questions relates to Section 12 'Legislative changes to the energy efficiency requirements' of the consultation paper.

Question 65. Do you agree that Part L1 of Schedule 1 should be amended, as above, to require that reasonable provision be made for the conservation of energy and reducing carbon emissions?

a. Yes

b. Yes, and I'd like to provide further information

c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

n/a

Question 66. Do you agree that regulations 25A and 25B will be redundant following the introduction of the Future Homes and Buildings Standards and can be repealed?

a. Yes

b. Yes, and I'd like to provide further information

c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

n/a

Question 66. Do you agree that regulations 25A and 25B will be redundant following the introduction of the Future Homes and Buildings Standards and can be repealed?

a. Yes

b. Yes, and I'd like to provide further information

c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

n/a

13. A review of our approach to setting standards

This page of survey questions relates to Section 13 'A review of our approach to setting standards' of the consultation paper.

Question 67. Do you agree that the Home Energy Model should be adopted as the approved calculation methodology to demonstrate compliance of new homes with the Future Homes Standard?

a. Yes

b. Yes, and I'd like to provide further information

c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

Further comments on Elmhurst's views on the HEM are provided in the HEM consultation responses.

Elmhurst would also highlight that homes are currently being sold off plan via the use of Predicted Energy Assessments. These documents should only be able to be produced by accredited On Construction Domestic Energy Assessors, and lodged onto a register as per the model for EPCs. This would allow these reports to be visible and therefore subject to quality assurance audit thus ironing out any issues at an appropriate stage in the process i.e. before construction commences. Currently accreditation schemes perform quality assurance auditing on EPCs and if issues are found it is not possible to change the building design at this point thus could contribute to the performance gap.

Question 68. Please provide any comments on the parameters in the notional building

Please provide any comments here.

Elmhurst supports the notional building approach to setting the performance standards for the reasons given in the consultation.

There is concern in the industry in regards to the calculation of PV currently in the proposed option 1 notional building. For homes that have hipped roofs, dormer windows or other roof designs that limit the roof area available for solar there is concern that they would not be able to meet the performance standards proposed in option 1, so regrettably will select the option 2 proposal.

This is not an issue in Part L 2021 but due to some changes in the calculation of PV in the consultation is a concern for builders. In the proposed option 1 notional building the orientation of the PV is always set as south. In Part L 2021 this was set as south east/west so changing this to south only for FHS makes compliance significantly more demanding for homes without an appropriate south facing roof. Additionally the conversion factor from PV area to power reducing from 6.5 m²/kWp to 4.5 m²/kWp is compounding the concerns. However from speaking to the solar PV industry it is understood this is a viable increase in panel efficiency by the time the new standards commence in 2025.

Elmhurst proposes that the orientation of the PV array on the notional building should be either returned to the value in Part L 2021 (south east/west) or be the same as the orientation of the actual dwelling. This would make achieving option 1 fairer for homes without large south facing roofs.

As this will possibly make the option 1 performance standards slightly weaker, to offset this we propose to improve the fabric performance to the levels that was proposed in the 2019 Future Homes Standard consultation, specifically the wall u-value of 0.15 w/m²k and floor u-value of 0.11 w/m²k. This will have an additional benefit of reducing the space heating demand thus resulting in lower energy use, carbon emissions and fuel bills for occupants.

Question 69. Minimum standards already state that heat pumps should have weather compensation and we would like to understand if stakeholders think this is enough to ensure efficiency of heat pumps under the varying weather conditions across England. Should the notional building use local weather?

a. Yes

b. No

Please provide any evidence you have on the unintended consequences that could arise as a result of using local weather in the notional building. If possible, please comment on the impact on the construction industry in terms of design and building feasibility. We also welcome views on whether weather compensation is sufficient to ensure heat pump efficiency.

Elmhurst agrees that varying weather conditions across England should be taken account of when calculating the performance standards in the Future Homes Standards. The use of local weather data must not however cause a delay in the calculation speed of the engine. Calculations must be able to be done instantaneously as they currently are, which is an expectation of industry.

In terms of impacts on the industry this will require an increase in the number of assessments on HEM to determine compliance where a developer wants to build the same house type across different regions. Alternatively developers may take a worse case approach, use HEM to calculate which region is the most demanding for achieving compliance, then build that house design across the country. This could lead to unintended consequences such as heat pumps not being correctly sized for the actual location the dwelling is constructed at. However the same will occur if UK average weather data is used so Elmhurst supports using local weather data.

Question 70. Do you agree with the revised guidance in The Future Homes Standard 2025: dwelling notional buildings for consultation no longer includes the average compliance approach for terraced houses?

a. Yes

b. No

Please provide any evidence you have on the unintended consequences that could arise as a result of these changes.

Elmhurst believes that compared to blocks of flats the average compliance method was rarely used in terraced houses so we do not believe this will have a significant impact on the industry.

Question 71. Do you agree with the revised guidance in Approved Document L, Volume 1: Dwellings which states that you should not provide a chimney or flue when no secondary heating appliance is installed?

a. Yes

b. No

Please provide any further evidence.

n/a

Question 72. Do you agree with the proposed approach to determine U-values of windows and doors in new dwellings?

a. Yes

b. No

Please provide any further evidence.

Elmhurst are not convinced that the small increase in accuracy advocated by the proposed approach will offset the impact across the industry this will cause. For energy assessors this will substantially increase the amount of time needed for data entry into HEM, which already is more complex than SAP 10.2. The removal of the 'SAP default' option for openings would then also present a problem for energy assessors where the u-value required by the proposed approach is not available.

Additionally for manufacturers this will require an extensive program of testing to derive the u-values of their units at considerable cost especially for smaller manufacturers. This may not be achievable in the time available before the Future Homes Standard commences.

Question 73. Do you agree with the proposal to remove the default y-value for assessing thermal bridges in new dwellings?

- a. Yes
- b. Yes, and I'd like to provide further information**
- c. No (please provide justification)

If you selected answer options b or c, please provide further information here.

Elmhurst believes it is rare that homes built to Part L 2021 would use the default y-value of 0.2. However there may be some rare scenarios where the default is used and compliance achieved. This may be due to a lack of information being provided to the energy assessor so the default is used. However this will contribute to the performance gap as in reality the heat loss via thermal bridging could vary significantly from the default y-value so we support it's removal.

Elmhurst would also recommend that the requirements for who can perform modelling of junctions to calculate psi values must specifically state that individuals should be members of a competency scheme due to the importance of accurate psi values used in energy assessments.

Question 74. Do you have any information you would like to provide on the homes built to the Future Homes Standard using curtain walling?

Elmhurst have no additional information to provide.

Question 75. Do you agree with the methodology outlined in the NCM modelling guide for the Future Buildings Standard?

- a. Yes,**
- b. No (please provide justification)

If you selected answer option b, please provide further information here.

n/a

Question 76. Please provide any further comments on the cSBEM tool which demonstrates an implementation of the NCM methodology.

Elmhurst welcomes the changes included to make the user experience better within the user interface and some of the updates to the methodology. There are still some outstanding areas that are known to be issues within SBEM/methodology that require investigation prior to any official software release. These include:

- LED lighting when combined with gas heating often results in worse rating compared to tungsten lighting, due to increase in heat demand.
- Foundation area if 0m² causes a critical error and will not calculate.
- Light plant room activity if assigned with heating causes a critical error and will not calculate

Question 77. Please provide any further comments on the research documents provided alongside the cSBEM tool and which support the development of the NCM methodology, SBEM and iSBEM.

Elmhurst have no comment on the research documents.

14. Transitional Arrangements

This page of survey questions relates to Section 14 'Transitional Arrangements' of the consultation paper.

Question 78. Which option describing transitional arrangements for the Future Homes and Buildings Standard do you prefer (page 83)? Please use the space provided to provide further information and/or alternative arrangements.

Option 1 is 6 month implementation, Option 2 is 12 month implementation

a. Option 1

b. Option 2

Please provide further information or suggest alternative transitional arrangements with your rationale and supporting evidence.

Elmhurst suggests option 1 would give sufficient time for the industry to prepare for the introduction of the Future Homes Standard and HEM. However this is only possible if the HEM:FHS and EPC wrappers are fully complete at the point the regulations are published.

For Part L 2021 the delivery of the SAP 10 specifications and test cases was extremely poor with frequent errors, omissions and delays resulting in all SAP software providers having to produce products that were not up to the industry's expectations. The ramifications of this for the industry were severe with users unable to confidently assess compliance for Part L 2021 until almost six months after the regulations commenced. Elmhurst unfairly received a lot of criticism from the industry for this and there seemed to be little accountability or governance from other stakeholders in the process. It is vital that HEM and the relevant wrappers are fully complete to avoid a repeat of this for the Future Homes Standard. If this is the case then a six month implementation period will be sufficient here.

It is important we move to the Future Homes Standard as quickly as possible to ensure as many homes as possible are net zero ready.

Question 79. Will the changes to Building Regulations proposed in this consultation lead to the need to amend existing planning permissions? If so, what amendments might be needed and how can the planning regime be most supportive of such amendments?- No Opinion

- a. Yes (please provide further information)
- b. No

If you selected answer option a, please provide further information here.

Elmhurst have no opinion on this matter.

Question 80. Do you agree that the 2010 and 2013 energy efficiency transitional arrangements should be closed down, meaning all new buildings that do not meet the requirements of the 2025 transitional arrangements would need to be built to the Future Homes and Buildings Standards?

- a. Yes**
- b. No (please provide justification)

If you selected answer option b, please provide further information here.

n/a

Question 81. What are your views on the proposals on page 85 and do you have any additional evidence to help us reach a final view on the closing of historical transitional arrangements?

Please provide any comments here.

Elmhurst fully supports the Government in sunsetting the older transitional arrangements as quickly as possible and would support a smaller transitional period of 6 months for any sites being built to Part L 2006, 2010 or 2013 regulations.

Elmhurst is aware that many homes are still being built out to Part L 2010 and 2013 as many of our members are actively using our older SAP software products to create compliance reports and lodge EPCs for these regulations. Due to the age of these software products it is becoming unviable to maintain them to modern security standards and could result in a position where there is no available software solution for calculations against these older versions of Part L.

Additionally in order to ensure as many homes as possible are built to the Future Homes Standards the sunsetting of the older arrangements will support this.

15. Part O – Call for Evidence

This page of survey questions relates to Section 15 ‘Part O – Call for Evidence’ of the consultation paper.

Question 82. Part O does not apply when there is a material change of use. Should it apply?

a. Yes

b. Yes, but only for some types of conversion (please list from reg 5a-k or describe the type)

c. No

Please provide more details about why Part O should/should not apply to a material change of use and, if possible, point to existing evidence/examples that demonstrates your view.

Elmhurst believes all building types should be assessed for Overheating risk and cannot see any strong reason why certain building types should be exempt.

Material changes of use often require improvements of fabric elements, airtightness and increased amounts of glazing making them potentially high risk of overheating in the summer.

Flats, hotels, institutional buildings are often susceptible to overheating due to being located in urban areas where the urban heat island effect and they are often single aspect.

Elmhurst would also recommend that the requirements for who can perform Overheating assessments must specifically state that individuals should be members of a competency scheme due to the significant risks posed by overheating in buildings.

Question 83. Apart from material change of use, is there anything missing from the current scope of Part O?

a. Yes, (please provide justification)

b. No, (please provide justification)

Please provide further information here.

See response to question 84.

Question 84. Can you provide evidence on how the addition of extensions or conservatories to domestic buildings can impact overheating risk on an existing building?

a. Yes, (please provide justification)

b. No

If you selected answer option a, please provide further information here.

As an accreditation scheme for On Construction Domestic Energy Assessors we receive many examples of very highly glazed extensions being added to existing homes. The current procedures in Part L allow offsetting of high amounts of glazing by improving fabric and/or services in the existing dwelling to compensate. Extensions are often not thermally separated from the existing house therefore high temperatures from the solar gains will influence areas of the existing house as well.

We believe conservatories are also susceptible to influencing the overheating risk of existing dwellings. Conservatories are currently exempt from Part L/O where thermally separated from the existing home, but in practice thermal separation does not always stop the risk of overheating from the conservatory.

Question 85. We are currently reviewing Part O and the statutory guidance in Approved Document O. Do you consider there to be omissions or issues concerning the statutory guidance on the simplified method for demonstrating compliance with requirement O1, for buildings within the scope of requirement O1

a. Yes (please provide justification)

b. No

If you selected answer option a, please provide further information here.

Elmhurst understands there are a significant amount of uncertainties, inconsistencies and general queries regarding the simplified method. This can lead to varying quality of reports being submitted to the Building Control Bodies who may not be aware of the detail of the calculations used.

Some examples of queries include;

- How are horizontal roof windows/lights incorporated?
- Are doors permitted as free area?
- Why can shading not be accounted for in the moderate locations when it is required in the high risk locations?
- There is some confusion over free area and equivalent area where Part O switches between the two in different areas.

There is no industry standards for the simplified method e.g. conventions groups. There are also a number of free to use tools for calculating compliance with the simplified method, but these can give different outcomes based on the interpretation of the Approved Document.

Elmhurst would also recommend that the requirements for who can perform Overheating assessments must specifically state that individuals should be members of a competency scheme due to the significant risks posed by overheating in buildings.

Question 86. Do you consider there to be omissions or issues concerning the statutory guidance on the dynamic thermal modelling method for demonstrating compliance with requirement O1 for all residential buildings?

a. Yes, (please provide justification)

b. No

If you selected answer option a, please provide further information here.

The work produced in line with the detailed method is of varying quality as there is no specific definition of competency required to complete this. Elmhurst believes due to the importance of this work that only members of a competent persons scheme should be permitted to undertake work for the detailed method of Part O.

The report template that should be used when submitting detailed method work to BCBs is not detailed enough and doesn't contain enough relevant information for on site verification of mitigation measures/strategies.

Question 87. Do you consider there to be omissions or issues concerning the statutory guidance on ensuring the overheating mitigation strategy is usable for buildings within the scope of requirement O1?

a. Yes, (please provide justification)

b. No

If you selected answer option a, please provide further information here.

Elmhurst has no relevant evidence to answer this question.

Question 88. Do you consider there to be omissions or issues concerning the statutory guidance on protection from falling?

a. Yes, (please provide justification)

b. No

If you selected answer option a, please provide further information here.

Elmhurst has no relevant evidence to answer this question.

Question 89. Are you aware of ways that Approved Document O could be improved, particularly for smaller housebuilders?

a. Yes, (please provide justification)

b. No

If you selected answer option a, please provide further information here.

As per our answer in question 85 there are a number of issues with the simplified method that need to be addressed. The simplified method is the preferred method for the industry including small and large developers, but due to these issues many are having to proceed with the detailed method. This can be very expensive for the smaller housebuilder and also result in delays due to the shortage of competent modellers available to do this work.

Question 90. Does Regulation 40B require revision?

a. Yes, (please provide justification)

b. No

If you selected answer option a, please provide further information here.

n/a

Question 91. Do you consider there to be omissions or issues concerning the statutory guidance on providing information?

a. Yes, (please provide justification)

b. No

If you selected answer option a, please provide further information here.

n/a

Question 92. Are there any improvements that you recommend making to the information provided about overheating in the Home User Guide template?

a. Yes, (please provide justification)

b. No

If you selected answer option a, please provide further information here.

n/a

Question 93. Are there any omissions or issues not covered above with the statutory guidance in Approved Document O that we should be aware of?

a. Yes

b. No

If you answered yes, please provide more details including suggestions on ways to improve the statutory guidance and point to existing evidence/examples that demonstrates why the gaps or issues you have identified should be reviewed as a priority.

16. Equalities and Impact Assessments

This page of survey questions relates to Section 16 'Equalities and Impact Assessments' of the consultation paper.

Question 94. 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. If possible, please provide evidence to support your comments.

Elmhurst have no additional feedback on this section.


Question 95. Please provide any feedback you have on the impact assessments.


Elmhurst firmly believe that energy efficiency education should be made a priority. The development of SAP 11 (and associated SBEM and RdSAP methodologies) must reflect the impact of new proven technologies and innovation, and the changes in power generation that impact on carbon emissions and prices. This is especially true when it comes to the energy required to cool buildings. While using energy here should never be seen as a substitute for good design, it should be included within regulated energy calculation. The models need continual investment to ensure they remain the best tools for the year-round assessment of all UK buildings. However, 'design' is only part of the picture when it comes to the impact of energy regulation.

It is time to recognise the importance of measuring actual energy consumption. Using the technology available, such as smart meters and Elmhurst's Measured Energy Performance technology, we now can measure the real-time energy consumption of all buildings, calculating the heat loss through a building's walls, floor and roof. When combined with EPCs, this gives us a highly accurate picture of what is actually happening in a building. This has huge benefits for checking compliance with Building Regulations in new homes construction or retrofit, and in proving the efficacy of our national energy modelling tools such as SAP and SBEM. Additional technologies, such as tools to measure U-Values, air tightness testing and thermal imagery are also powerful ways to help test assumptions and validate and improve energy assessment methodologies.

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