

**FINAL**



# **Consultation Response**

**Review of Energy Efficiency Requirements and  
Related area of Building Regulations – Northern  
Ireland**

Prepared for: Department of Finance, Northern Ireland  
Government

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## Introduction

Elmhurst Energy are pleased that the Department of Finance, Northern Ireland Government are seeking consultation on their “Review of Energy Efficiency Requirements and Related area of Building Regulations” and as such we are delighted to respond to each question in turn.

The consultation asked **137** questions and we have answered them all below. We hope you find the responses considered and useful for taking Building Regulations in Northern Ireland forward in a progressive manner.

## Questions and Answers

### Section 2A: Background- legislative considerations and policy contexts

#### **Q2A.1 Do you agree that coming into force considerations would be best addressed through review of Article 19 of the Order, rather than by transitional provisions of any amendment to Part F?**

No strong opinion.

#### **Q.2A.2 Do the current arrangements here, with up to three year phasing in period, support an argument for a more ambitious uplift, as it provides scope for processes to be developed and training to take place?**

Yes, a phasing in period allows necessary adjustments to be made within industry whilst also allowing for a more ambitious uplift.

#### **Q.2A.3 What do you consider should be the maximum time permissible for previously approved applications to commence on site after the introduction of the new standards?**

Elmhurst believes that a one year time period is sufficient to allow previously approved applications to commence on site after the introduction of the new standards. The one year period would mirror that in England when the building regulations were updated in 2022.

**Q.2A.4 Do you have a view on any specific regulations or definitions which would benefit from reform, with a view to simplifying or clarifying Part F regulations? If so, please provide details.**

Elmhurst have no specific views on this.

## **Section 2B: Background (developments elsewhere)**

**Q.2B.1 Have you modelling information directly comparing the compliant or 'notional' buildings across administrations, ideally using an up to date and consistent methodology for comparative analysis purposes (e.g. SAP 10)? If so, please provide a link or information on how to access this.**

Elmhurst have an approved version of SAP10 software (Design SAP10) across all administrations that currently use SAP 10 (England, Wales and Scotland)– we would be happy to provide a trial license to our software for comparative analysis purposes if of help.

**Q.2B.2 Are there any additional local characteristics or issues around our local industry that the Department should be mindful of as we take forward proposals?**

As has already been covered within the Discussion document, a policy consideration in off-gas grid areas and reliance on oil heating is a major 'local' issue that requires thought.

Elmhurst recognises the extensive political debate, when aligning under NI Protocol to the EPBD. For the best interests of assessment methodology within the UK, it makes sense that as much as possible we try to maintain a consistent approach.

**Q.2B.3 Do you agree with the proposed timing of uplifts planned for 2023/24 (Phase 3) and 2026/27 (Phase 4), which are intended to follow developments in England by 18-24 months in each case?**

Yes

### Section 3: Pre-consultation Phase 3 proposals for dwellings

**Q.3.1 The Department's programme of proposals seeks to implement a 'Phase 3' uplift here in 2023 (likely now to be in 2024) to reflect the changes above. Do you agree that this is appropriate and that this should cover the extent of issues outlined in this section?**

Yes

### Section 3A: Part F (Conservation of fuel and power) proposals for new dwellings, Phase 3

**Q.3A.1 Do you agree that a new primary energy metric and TPER targets should be introduced?**

Yes- Elmhurst agrees that a Primary Energy metric is required in the Phase 3 uplift to Part F. As electricity has a low carbon factor in SAP 10 an energy based metric is required to ensure homes are low energy as well as low carbon. Elmhurst also supports a Primary Energy metric to ensure consistency with other regions of the U.K.

**Q.3A.2 Are you content that a FEES metric and targets should be introduced in line with the assessment in England?**

Yes- The FEES metric has been used in Building Regulations in England since 2013 and has been crucial to driving improvements in fabric standards in new homes. Without the FEES metric it may be possible to build new homes with lower fabric standards than Part F 2022 if electric heating is used as the low carbon factor of electricity would mask a poor building envelope. This would result in homes that whilst may be low carbon, would have high utility bills.

**Q.3A.3 Could you provide a specification that house builders are actually adopting in practice in order to be compliant with England’s current requirements? Please provide details and commentary or explanation.**

Yes- Typically Elmhurst are seeing two approaches to meeting Part L 2021. If the builder wishes to use mains gas for space and water heating, the fabric standards are typically close to the notional dwelling specification with Waste Water Heat Recovery and Photovoltaic Panels used to achieve the compliance standards.

If the builder cannot/does not wish to use mains gas, then an air source heat pump is usually used instead. The fabric standards would still need to be close to the notional dwelling to meet FEES, but by using a heat pump it is generally possible to meet compliance standards without the use of WWHRS and PV.

Elmhurst can supply more detailed compliant specifications if needed.

**Q.3A.4 Do you think the proposed Notional Dwelling fabric is suitable for Option 1 and Option 2’s proposals?**

Yes- Elmhurst believes the proposed notional dwelling fabric is suitable, however we would point out that the thermal mass parameter in the notional dwelling should simply match what the actual thermal mass of the building is, rather than being set as ‘medium’ at all times. This is what England and Wales adopted in their latest Part L standards.

**Q.3A.5 Would you agree with replication of England’s limiting U-values? We would be grateful for any evidence or reasoning if you think these should these remain in line with the Republic of Ireland or be otherwise different.**

No- Whilst we appreciate that the FEES standard will drive fabric performance of new homes, by adopting the English limiting u-values this is essentially a relaxation of the standards compared with Part F 2022. There are some instances in England where builders have achieved FEES with using wall u-values greater than 0.18, so we believe the current Part F 2022 limiting u-values should still be retained.

**Q.3A.6 Do you agree that the Department should not introduce a cost (SAP rating) metric assessment?**

No- Elmhurst believes that there needs to be a minimum target to ensure that homes are affordable to run. To not do so may encourage builders to deliver low carbon solutions that the occupier cannot afford to run creating fuel poverty and, in extreme cases, ill health and death.

The Energy Performance Certificate should also be re-presented to ensure that performance against each of the compliance metrics is clearly stated.

**Q.3A.7 Do you agree that a delivered energy or energy use intensity metric is not needed as part of the Phase 3 uplift?**

Yes- Elmhurst believes the proposed primary energy, carbon and FEES standards are well understood in industry and should form the compliance standards for the Phase 3 uplift.

**Q.3A.8 Do you agree that a renewable energy ratio assessment is not needed as part of the Phase 3 uplift?**

Yes- Elmhurst believes that a renewable energy ratio is not required as a compliance standard however we would recommend that for the notional dwelling the PV calculation should be based on a similar procedure e.g. 10% of the primary energy supplied by renewables, rather than the method of using 40% of floor area/6.5.

**Q.3A.9 Have you any comment to make on the metrics the Department is proposing to adopt for Phase 3?**

No further comments

**Q.3A.10 Have you any opinion or evidence to support limiting the extent of variance for any individual dwelling when using a whole-block average performance to demonstrate compliance with TER, TPER or TFEE assessments?**

No- Elmhurst believes the block average route to demonstrating compliance should be retained and extended to the new Primary Energy and FEES metrics in Phase 3.

**Q.3A.11 Do you agree that the changes to the airtightness testing regime should include the measures introduced in England, but provide for a lower maximum permissible air permeability level than 8.0 m<sup>3</sup>/(h.m<sup>2</sup>) @ 50 Pa? If so, what should the maximum permissible level be?**

Yes- Elmhurst believes the maximum permissible level should be 5.0 as this is typically what most new homes aim for and should not result in problems for the industry as only 9.5% of homes would have been impacted by this since 2021.

**Q.3A.12 Do you agree that all current fuel factors in TBF1 should be removed, so that targets (TER) are no longer relaxed where higher carbon fuels are used?**

Yes- Elmhurst agrees that the fuel factors should be removed in order to encourage the transition away from high carbon fuels. The SAP methodology should always be focussing on the truth and should not be corrupted to achieve commercial or political ends.

**Q.3A.13 Are you content with the likely outcomes for biofuels under Option 1 and the proposed Primary Energy metric? If not, how should the regime be less, or more, permissive towards biofuels?**

Yes- Elmhurst believes Biofuels should not be treated differently to any other fuel type in regards to the compliance metrics in Part F.

**Q.3A.14 Have you any evidence or concern around the extent of renewable generating technology expected under either Option 1 or 2?**

Yes- Elmhurst does not have concerns about the extent of renewables in option 1, but we have heard anecdotal evidence about the viability of this in certain house designs. Rather than base the amount of PV on floor area it may be worth looking at basing the amount of PV around a % of the TPER.

**Q.3A.15 Have you any comment on the proposed revised treatment of non-export connections?**

No

**Q.3A.16 Do you agree that new heating systems should be designed and installed to operate with a maximum flow temperature of 55°C as per England's current guidance? If not please provide evidence to support a different maximum flow temperature, or position.**

Yes- Elmhurst believe house design should be future proofed wherever possible, however unintended consequences should be considered. For example, oversized radiators needed for low temperature systems may be positioned poorly, and the increased body of water may impact on the responsiveness of the system.



**Q.3A.17 Do you agree that replication of Sections 5 and 6 of England's Approved Document on building services and controls guidance into the next version of TBF1 would be appropriate for the Phase 3 proposals?**

Yes- This seems sensible and consistent with other regions.

**Q.3A.18 Do you have any comments or issues around how UK and EU Ecodesign requirements might interact with Part F guidance requirements at Phase 3 or over the longer term?**

No comment.

**Q.3A.19 Do you agree that designers, should be able to demonstrate a water efficiency assessment as per Appendix A of England's Approved Document G?**

Yes- Elmhurst agrees that a water efficiency assessment is a useful inclusion into Part F. We would suggest looking at the target of 125 l/p/day to ensure it is appropriate for Northern Ireland as many local authorities in England are now asking for more ambitious targets than this due to local concerns about water use.

**Q.3A.20 Have you any suggestion or further insight on how heat networks should be assessed under the Phase 3 proposals? If so, please outline the issue and suggested handling in your response.**

Yes- Elmhurst believes the current method of assessing heat networks in England works well as it allows some flexibility for connecting to existing heat networks but also ensure low carbon heat networks are appropriately rewarded.

**Q.3A.21 Is the specification of the heat pump proposed for Option 2 appropriate? If not, how should it be amended?**

Yes- Elmhurst agrees that the efficiency of 250% is not appropriate as it is not possible to match this in SAP software. We agree that the space heating efficiency of 295% and water heating efficiency of 195% are more appropriate values to use.

**Q.3A.22 Do you have concerns or evidence on the viability and risks associated with either Option 1 or Option 2?**

No comment.

**Q.3A.23 Should the Department implement Option 1 or Option 2 for the Phase 3 uplift?**

No comment.

**Q.3A.24 Have you any comment on how the Option 2 specification should be improved, for Phase 3 or Phase 4 or 5?**

No comment.

**Q.3A.25 Do you agree that the Department should adopt the new BREL type format for notice of compliance with emissions, renewables and other requirements in keeping with England's provisions? See Appendix B of Approved Document L1 (2021) for further detail**

Yes- We agree that an industry standard compliance report that can only be produced by BRE approved SAP software is the right approach for the industry. However the current BREL report has a number of areas which should be improved by consultation with the industry and also the report format should allow SAP software providers to add digital signatures to the reports.

**Q.3A.26 Do you agree that the Department's guidance should additionally require provision of a new non-technical Home User Guide in keeping with England's provisions?**

Yes- Elmhurst agree that the home owner should have a full set of the user guides related to the property. To ensure that these guides are accessible to future occupiers they should be retained in a property log book, together with the EPC and the Building Regulations compliance report, for future occupiers to access.

**Q.3A.27 Do you agree that the Department should require geo-located photographs to be lodged to support evidence of the as-built construction?**

Yes- Elmhurst agree that there should be a photographic record kept of key aspects of the construction supplied to the accredited energy assessor, before issuance of the compliance report and EPC. The photographs should be date and time stamped, as well as geotagged to prevent misuse. Copies of the photographs should be supplied to the future occupants via the Building Logbook portal.

We would recommend clear guidance is provided by the Department to all industry stakeholders in regards to how to proceed should photos not be available or insufficient. We would also recommend clear guidance is issued from the Department as to what each stakeholders' (SAP assessor, Building Control Body, Builder) responsibility in this process is as this has been an area for confusion since this was introduced in Part L 2021 in England.

**Section 3B: Part F (Conservation of fuel and power) work to existing dwellings, Phase 3.**

**Q.3B.1 Do you support the addition of a Primary Energy and FEES metric assessment alongside the current Carbon emissions metric assessment when using the Equivalent Target Approach to demonstrate compliance in cases of work to existing dwellings?**

Yes- Elmhurst thinks that using primary energy, fabric energy efficiency and retaining carbon emissions as metrics would ensure good energy efficient extensions, with appropriate carbon emissions.

**Q.3B.2 Do you have any particular concerns or insight on the U-values used in standards related to existing dwellings for any of the various situations in other administrations?**

No

**Q.3B.3 Do you agree that our U-value standards should be largely in line with the proposed standards for new building elements in cases of extensions and replacement elements?**

Yes- Elmhurst agrees that for new building elements in existing homes there is little reason to allow more relaxed standards than as for a new home.

**Q.3B.4 Do you agree that our U-value standards should be largely in line with the values used in England, in cases of a material change of use of a building, for renovated elements and where a change of energy status occurs?**

Yes- It seems sensible to be consistent with other areas of the U.K.

**Q.3B.5 Are there any particular areas where alternative performance values for fabric elements (such as EWI) should be considered? If so please provide evidence and an indication of the value you consider appropriate.**

No comment

**Q.3B.6 Do you agree that a maximum glazing area assessment should continue to form part of the requirements, where a material change of use to form a dwelling occurs?**

Yes- As the proposed overheating mitigation measures may not apply to material changes of use then setting a maximum glazing area should still be required.

**Q.3B.7 Do you agree that traditional construction should be referenced out to third party guidance, with a greater scope for bespoke consideration in these situations?**

No Strong Opinion

**Q.3B.8 Do you agree that the Boiler Plus measures introduced in England in 2018 and thermostatic control measures introduced in 2022 should be replicated and included in revised guidance here?**

Yes- It seems sensible to be consistent with other areas of the U.K.

**Q.3B.9 Do you agree that where a new or complete replacement heating system is being installed in an existing dwelling, it should be installed to operate with a maximum flow temperature of 55°C?**

Yes- It makes sense to have a maximum flow temperature limit of 55°C for new or replacement heating systems.

**Q.3B.10 Do you agree that both an emissions and primary energy performance assessment should be applied to boiler replacements where a change of fuels is proposed?**

Yes- The introduction of primary energy performance assessment is supported as this will prevent homes switching heating systems to direct acting electric systems which could result in very high fuel bills for occupants.

**Q.3B.11 Do you have information or evidence to help assure the Department that reversion from liquid biofuels to conventional home heating oil need not be of concern?**

No- Elmhurst does not have evidence to answer this.

**Q.3B.12 Do you agree that Technical Booklet F1 should be amended to follow the minimum services provisions of Section 5 and 6 of England's Approved Document L1, subject to further NIBRAC and public consultations? Have you any 'lessons learned' from the roll-out of these provisions elsewhere which merit consideration?**

No strong opinion.

**Q.3B.13 Do you agree that the consequential improvements similar to those applicable to extensions to dwellings in Wales should apply here?**

Yes- Elmhurst agrees that were significant building work such as a new extension is undertaken then the energy performance of the entire building should be improved via consequential improvements.

**Q.3B.14 Do you have any evidence or insight on the major renovation measures in place in the Republic of Ireland to suggest the Department should prioritise a similar approach here? If so, please include the evidence with your response.**

No- Elmhurst does not operate in the Republic of Ireland so cannot comment here.

**Section 3C: Part K (Ventilation) dwellings- Phase 3**

**Q.3C.1 Do you agree that Technical Booklet K (TBK) should be split into two (similar to current Part F guidance), and that relevant guidance currently cited within the Ventilation Compliance Guides should be integrated within them?**

Yes

**Q.3C.2 Do you agree that Technical Booklet K should cite background ventilator sizes in line with England and Wales?**

Yes- It seems sensible to be consistent with other areas of the U.K.

**Q.3C.3 Do you agree that revised TBK guidance should align with the three systems (natural, continuous mechanical extract and continuous supply and extract/MVHR) in keeping with air-permeability thresholds England and Wales?**

Yes- It seems sensible to be consistent with other areas of the U.K.

**Q.3C.4 Do you have any evidence or guidance that should prompt the Department to develop an independent approach to noise of mechanical ventilation systems in dwellings?**

No

**Q.3C.5 Do you agree that the updated performance based specification in England's ADF1 (Ventilation – dwellings) should be replicated in equivalent guidance here?**

Yes- It seems sensible to be consistent with other areas of the U.K.

**Q.3C.6 Do you support amendment of the Technical Booklet K guidance in line with the developments in England and Wales, to address ventilation alongside fabric retrofit work?**

Yes- This should also include the procedure for completing a Background Ventilation test to prove that ventilation is appropriate where retrofit works have been completed. More information on this can be found [here](#).

**Q.3C.7 Have you any comment or insight on how the Department or others should support skills or cite competence standards for the design, testing and commissioning of ventilation systems in dwellings? Please include relevant details in your response.**

No comment

**Q.3C.8 Have you any other evidence on issues or suggestions on ventilation standards in dwellings, which the Department should consider as part of the review of Part K (Ventilation)?**

No comment



**Q.3C.9 Do you agree that CO2 monitoring should be a consideration for Phase 4?**

No comment

**Q.3C.10 Do you support inclusion of ventilation guidance to more specifically consider clothes drying, in line with current provisions in Scotland?**

No comment

**Q.3C.11 Do you have any evidence or insight on other aspects of ventilation for dwellings which the Department should take into account?**

No comment

**Section 3D: Mitigating overheating risks in dwellings – Phase 3**

**Q.3D.1 Do you agree that local regulation and guidance will be needed to mitigate overheating in new dwellings and residential buildings?**

Yes - Elmhurst agrees that a new regulation and guidance is required to mitigate overheating in new dwellings. As new homes are increasing levels of insulation and air tightness, as well as a warming climate, it is important to ensure homes built today will not suffer from overheating in future.

**Q.3D.2 Do you agree with the proposed course of action whereby DSM modelling to TM59 requirements would be used in more complex situations but a simplified approach, largely following Scotland's proposals, could be applied in more straightforward situations?**

Yes- Elmhurst encourages this approach in line with the other regions of the UK.

**Q.3D.3 Should the new requirements only apply to new-build situations (i.e. to the erection of a building) or should it also apply to material change of use situations and/or extensions and structural alterations?**

No- Homes created by material change of use are also at risk of overheating in hot weather therefore Elmhurst believes they should be in scope for the new requirements. In regards to extensions this should also be considered as there may be cases where large amounts of glazing are used as the impact of this can be offset by improving other areas of the home.

**Q.3D.4 Should the noise assessment levels be based on planning issues, or should bespoke noise assessment and testing be expected where openings are proposed for purge cooling of rooms in dwellings or similar buildings?**

Based on planning issues

**Q.3D.5 Are you content that the guidance in Appendix D of the current Technical Booklet K provides sufficient clarity on pollution assessment where natural purge ventilation for cooling is proposed?**

Yes

**Q.3D.6 Do you agree that guidance should be revised to support a 1.1m high guarding a openings for purge cooling, or should the current 800mm height for guarding at windows remain?**

No opinion

**Q.3D.7 Are there any other issues which should be taken into consideration in terms of the usability of openings for purge cooling?**

No further issues

**Q.3D.8 Have you any evidence or modelling to indicate if a requirement for cooling could result in new Carbon emissions or Primary Energy targets proposed in Section 3A (see Table 3A.1) being difficult, or impossible, to deliver in practice in some circumstances e.g. single aspect flats next to noisy/polluted roads? If so, please provide details and outputs.**

Elmhurst does not have any specific evidence but the use of cooling systems in SAP 10 generally makes a limited impact on the Dwelling Primary Energy Rate or Dwelling Carbon Emissions Rate.

**Q.3D.9 Can you evidence any ‘lessons learned’ from roll out of the overheating mitigation policies elsewhere that we should consider?**

In regards to the simplified method in England there are a number of areas of uncertainty which can result in differing conclusions depending on how these are interpreted. Additionally there is no approval process for tools used to demonstrate compliance with the Simplified method, and whilst Elmhurst have developed a tool for its members on this, other organisations have also produced tools which give different outcomes.

In regards to the detailed method this is a complex calculation requiring specific training and use of complex software packages. For this reason Elmhurst believes individuals carrying out work in accordance with this route should be a member of a competency scheme to demonstrate appropriate training and competence in this area. Elmhurst have ran a competency scheme for this since Part O was introduced in England with good take up.

## **Section 3E: Electric Vehicle infrastructure-background and Phase 3 proposals for dwellings**

**Q.3E.1 Do you agree with the proposed approach to use Building Regulations to legislate for EV infrastructure requirements?**

Elmhurst offer no opinion on this.

**Q. 3E.2 Do you agree with the proposed approach to follow the technical provisions in England? The Department would be grateful for any comment on the guidance or out-workings there or in other regions.**

Elmhurst offer no opinion on this.

**Q. 3E.3 Do you agree that for new dwellings with associated parking spaces; one CP per dwelling or one per associated parking space (which ever is the lesser) should be required and that, in addition, for those buildings with more than ten associated parking spaces, ducting to the rest of the residential parking spaces to facilitate future installations, should also be required?**

Elmhurst offer no opinion on this.

**Q. 3E.4 Do you agree with the proposed limitations 1 and 2 (as outlined in paragraph 3E.34 and 3E.35) restricting the application of the requirements for EV infrastructure at parking spaces associated with new dwellings?**

Elmhurst offer no opinion on this.

**Q. 3E.5 Do you think there should be a limitation to the application of the requirements, on the grounds of additional grid connection costs that may accrue to developers as a result of the provision of CPs?**

Elmhurst offer no opinion on this.

**Q. 3E.6 If the answer to Q 3E.5 is yes, do you think the amount of £3600 (which is currently under review) is appropriate and do you have any comment on how it should be assessed?**

Elmhurst offer no opinion on this.

**Q. 3E.7 Do you agree that where a major renovation results in a residential building being associated with more than 10 parking spaces, then CPs should be provided at a rate of one per dwelling<sup>110</sup>, or one per associated parking space (whichever is the lesser) and that that ducting should be installed in each associated car parking space, to support the future installation of an EV CP?**

Elmhurst offer no opinion on this.

**Q. 3E.8 Do you agree with the proposed limitations to requirements in the case of major renovations, as outlined in paragraph 3E.41-3E.47?**

Elmhurst offer no opinion on this.

**Q. 3E.9 Do you agree that where a dwelling is created through a material change of use, a CP should be required at any parking space associated with the new dwelling?**

Elmhurst offer no opinion on this.

**Q. 3E.10 Do you agree with the proposed limitations to the application of the requirement, where a newly created dwelling is established under a material change of use, as outlined in paragraph 3E.51-3E.55?**

Elmhurst offer no opinion on this.

**Q. 3E.11 Should a cost cap apply, instead of limiting the number of CPs on the basis of the existing supply, where a new electrical supply connection to the building occurs alongside a major renovation, or a material change of use that creates a new dwelling?**

Elmhurst offer no opinion on this.

**Q. 3E.12 Should there be a requirement for cable routes to all spaces associated with dwellings newly created by way of a material change of use, in circumstances where a building has more than 10 parking spaces?**

Elmhurst offer no opinion on this.

**Q. 3E.13 Do you have any other views that you wish to provide on the EV section of the consultation (e.g. the minimum standard of EV charge point or safety and accessibility within the built environment)?**

Elmhurst offer no opinion on this.

## **Section 4: Pre-consultation Phase 3 proposals for buildings other than dwellings**

### **Section 4A: Part F (Conservation of fuel and power) proposals for new buildings other than dwellings Phase 3**

**Question 4A.1 Do you agree that the Department should adopt the same Primary energy metric for new non-domestic building assessments, as proposed for domestic buildings?**

Elmhurst supports a Primary Energy metric to ensure consistency with other assessment types. As electricity has a low carbon factor, an energy based metric is required to ensure buildings are low energy as well as low carbon.

**Question 4A.2 Do you agree that the Department should develop proposals to adopt the Notional Building specification in line with England's Part L 2022 specification and requirements? If not, please provide evidence of why and how the specification should be altered.**

Yes. Elmhurst encourages a consistent approach in line with the other regions of the UK.

**Question 4A.3 Do you agree that the Department should develop proposals to adopt the limiting fabric U-values in line with England's Part L 2022 requirements? If not, please provide evidence of how the specification is impractical here and what alternative standard should be required.**

Yes. Elmhurst encourages a consistent approach in line with the other regions of the UK.

**Question 4A.4 Do you agree that the Department should develop proposals to adopt maximum permissible air-permeability values for new builds of 5.0 m<sup>3</sup>/(h.m<sup>2</sup>) @50Pa, or should it maintain consistency with England's approach?**

Yes. Elmhurst encourages a consistent approach in line with the other regions of the UK.

**Question 4A.5 Do you agree that the Department should develop proposals to adopt the limiting services standards in line with the requirements in England, Wales and Scotland? If not, please provide evidence of how the specification is impractical here and what alternative standard should be required.**

Yes. Elmhurst encourages a consistent approach in line with the other regions of the UK.

**Question 4A.6 Do you agree that the Department should develop proposals to include the limiting services standards within the Technical Booklet guidance documents, or is a more explanatory, separate Non-domestic Building Services Compliance Guide preferable? Please provide reasoning in your response.**

Yes, it can be confusing when there are multiple documents that need to be referred to. Having it all contained within one place is preferable.

**Question 4A.7 Do you agree that the Department should develop proposals to require BACS in new buildings? If so, should the threshold be at 290kW or 180kW? Please provide evidence or reasoning for your view.**

Yes. Proper control of heating/cooling systems is essential for them to be run efficiently. We would prefer the limit to be set at >180kw (which are still large systems).

**Question 4A.8 What is your view on the value of requiring either TM54 modelling of actual energy use in buildings >1000m<sup>2</sup> (as in England) or Scotland's conversion to Zero Direct Emissions Heating reports?**

Elmhurst believes the TM54 method of calculating predicted in-operation energy use is sufficient.

## **Section 4B: Part F (Conservation of fuel and power) proposals for work to existing buildings other than dwellings Phase 3**

**Question 4B.1 Do you support the addition of a Primary Energy metric assessment alongside the current Carbon emissions metric assessment when using the Equivalent Target Approach to demonstrate compliance in cases of work to existing buildings?**

Yes- Elmhurst thinks that using primary energy, fabric energy efficiency and retaining carbon emissions as metrics would ensure good energy efficient extensions, with appropriate carbon emissions.

**Question 4B.2 Do you have any particular comment, concern or insight on the U-values used for standards related to existing buildings in any of the various situations in other administrations?**

No

**Question 4B.3 Do you agree that our U-value standards should be largely in line with limiting standards for new buildings in cases of extensions and replacement elements on buildings other than dwellings?**

Yes- Elmhurst agrees that for new building elements in existing homes there is little reason to allow more relaxed standards than as for a new home.

**Question 4B.4 Do you agree that our U-value standards should be largely in line with the values used in England, in cases of a material change of use of a building, for renovated elements and where a change of energy status occurs involving buildings other than dwellings?**

Yes- It seems sensible to be consistent with other areas of the U.K.

**Question 4B.5 Are there any particular areas where alternative performance values for renovated elements or services should be considered for buildings other than dwellings? If so please provide evidence and an indication of the value you consider appropriate.**

No strong opinion.



**Question 4B.6 Do you agree that a maximum glazing area assessment should continue to form part of the requirements for extensions and be included where a material change of use occurs to buildings other than dwellings?**

Yes- As the proposed overheating mitigation measures may not apply to material changes of use then setting a maximum glazing area should still be required.

**Question 4B.7 Do you agree that traditional construction should be referenced out to third party guidance, with a greater scope for bespoke consideration in situations applicable to traditionally constructed buildings other than dwellings?**

No strong opinion.

**Question 4B.8 Do you agree that where a new or complete replacement heating system is being installed in an existing building, it should be installed to operate with a maximum flow temperature of 55°C?**

Yes, it makes sense to have a maximum flow temperature limit of 55°C for new or replacement heating systems.

**Question 4B.9 Do you agree that Technical Booklet F2 should be amended to follow the minimum services provisions of Section 5 and 6 of England's Approved Document L2, subject to further NIBRAC and public consultations? The Department would be grateful to understand any 'lessons learned' from the roll-out of these provisions elsewhere.**

No strong opinion.

**Question 4B.10 Do you have any evidence on the success or otherwise of consequential improvements? If so, please include this with your response.**

No

**Question 4B.11 Do you think consequential improvement requirements should be—**

- a. retained (i.e. maintained in keeping with England),**
- b. amended (for example to apply where the principal works are of a particular value, rather than being based on the total floor area of the existing building),**
- c. extended to apply to all extensions, or otherwise extended; or**
- d. revoked? Please provide a reasoning for your response and evidence that supports any changes you would propose.**

**A** - Elmhurst believes that were significant building work such as a new extension is undertaken then the energy performance of the entire building should be improved via consequential improvements.

**Question 4B.12 Do you have any evidence or insight on the major renovations measures in place in the Republic of Ireland to suggest the Department should prioritise a similar approach here for buildings other than dwellings? If so please include the evidence with your response.**

No- Elmhurst does not operate in RoI so cannot comment here.

## **Section 4C: Part K (Ventilation) buildings other than dwellings Phase**

**Question 4C.1 Do you agree that Technical Booklet K should take a similar approach to noise and installation of ventilation systems, as England and Wales?**

Yes

**Question 4C.2 Do you agree that Technical Booklet K should replicate the proposed performance based guidance outlined for dwellings?**

Yes

**Question 4C.3 Do you agree that Technical Booklet K (TBK) should bring the Appendix D guidance on polluted external air into the main body text of TBK?**

No strong opinion.

**Question 4C.4 Do you agree that the list of sources for design guidance provided in Annex F should be replicated in the new TBK, for application to specialist building types?**

No strong opinion.

**Question 4C.5 Are there any specific concerns or issues with the updated references proposed in the Table in Annex F, that the Department should consider? If so, please provide details.**

No

**Question 4C.6 Do you agree that requirements for air quality monitoring, similar to those introduced in England and Wales, should be included in the Phase 3 uplift package to Part K (Ventilation)?**

Yes

**Question 4C.7 Do you agree that requirements for increased ventilation rates to certain higher risk spaces, similar to those in England and Wales, should be introduced in Phase 3?**

Yes

**Question 4C.8 Do you agree that additional requirements for ventilation in offices, similar to those introduced in England and Wales, should be included in the Phase 3?**

Yes

## **Section 4D: Electric vehicle infrastructure- Phase 3 proposals for buildings other than dwellings**

**Question 4D.1 Do you agree with the proposed use of Building Regulations to implement Article 8.2 for the provision of EV charging point infrastructure at buildings other than dwellings?**

No strong opinion.

**Question 4D.2 Do you agree that ducting infrastructure for one in five parking spaces and one CP, should be installed when a non-residential buildings with more than 10 non-residential car parking spaces is being erected or is undergoing a major renovation?**

No strong opinion.

**Question 4D.3 Do you agree with the proposed limitations (outlined in para 4D.13-4D.18) to the application of EV charging requirements for new non-residential buildings and for major renovations of such buildings? If not, please comment on how should they should be changed.**

No strong opinion.

**Question 4D.4 Do you agree that more onerous residential requirements should apply in mixed-use building situations and shared parking arrangements?**

No strong opinion.

## Section 5: Considerations for Phase 4 uplifts

**Question 5.1 Do you agree that, for Phase 4, the Department should expect to replicate measures introduced in England’s Future Homes and Future Buildings (2025) in the first instance, or is there a particular administration that we should seek to align with for Phase 4? If possible, please provide supporting evidence for your preference?**

Elmhurst agrees that it makes sense to follow England’s Future Homes Standards as this will likely result in delivery of phase 4 as quickly as possible.

**Question 5.2 Would you support a ban on direct emissions heat generators or combustion appliances, similar to Scotland’s measures banning such appliances? (Please take into account your answer to Question 3A.23 on which Option you have supported.)**

No strong opinion.

**Question 5.3 Do you support efforts to more closely align the NCM and targets towards passive house standards, where possible?**

No- Elmhurst does not agree that aligning the NCM to passive house standards. Analysis of both SAP and PHPP has shown that that core physics between the two methodologies are similar, but SAP has a more detailed analysis of heating and hot water generation which is vital to the overall energy demand of a home. SAP has been around since the 1990’s, is scalable, has clear rules and conventions and well understood by the industry.

**Question 5.4 Have you any advice or evidence as to how further verification measures might help ensure the standard is delivered in practice (please provide details)?**

No further details to add.

**Question 5.5 Are there any other particular or detailed issues that the Department should be considering for new build Part F requirements for non-domestic buildings as part of Phase 4 developments?**

No further details to add.

**Question 5.6 Are there any other issues which the Department should be considering for Phase 5? Please note that some further/concurrent issues are discussed in Section 6 which may influence input on this.**

No further details to add.

## **Section 6: Concurrent issues - headline summary**

### **Section 6A: National Calculation Methodology issues**

**Question 6A.1 Do you agree that the local NCM should be consistent with England? If not, please provide any particular thoughts on how it should be varied, for example with the use of a local NI weather file, or with local cost or carbon intensity factors, rather than UK averages, in building regulation assessments.**

Elmhurst agrees that the local NCM should be consistent with England. Whilst we appreciate the arguments for using local weather data, carbon intensity factors etc. the impact of this will be minimal where the notional building approach is retained. The cost of developing software to use local data rather than the UK average would be very high and may result in SAP software providers struggling to justify this based on the size of the market in Northern Ireland.

## Section 6B: Embodied Carbon

### **Question 6B.1 Do you have any comments on EPDs that you would like to bring to the attention of the Department at this stage?**

Elmhurst have nothing additional to add regarding the assessment of Embodied Carbon except that industry calculation methodology is being agreed and looking to have voluntary disclosure for pilot projects on Upfront carbon, whole life carbon and whole project carbon to help inform and update methodology benchmarks and targets.

[Embodied and Whole Life Carbon: 2023-2025 Implementation plan for homebuilding industry](#)

### **Question 6B.2 Have you any insight or evidence on the likely professional costs incurred in carrying out a whole lifecycle assessment of carbon in a project? For example, is it likely to be comparable to the cost of a traditional Bill of Quantities? If so, what phases of the lifecycle assessment and data were included?**

Elmhurst are working with the Future Homes Hub on developing a simple and associated guidance for homebuilders that is scalable cost effectively in line with traditional BoQs. The simple tool will have built into it a number of common buildups, which users can select from (and in due course make changes to or create their own.)

### **Question 6B.3 Have you any opinion or insight on how to address any of the challenges listed? For example, a view on the extent and scope of assessments.**

The FHH as part of its working group is agreeing a set of FHH generic embodied impact data for the list of material / product categories found within the common buildups and then agreeing a set of modelling assumptions and conventions to be used when assessing new build homes. These could adopted by the Department.



**Question 6B.4 Do you agree that the intricacies and implications of embodied carbon mean that it is best considered at a UK wide level and that the Department should concentrate efforts on attending to the current gap in standards compared to other regions, in the first instance?**

Yes – any consideration of embodied carbon is best done at UK wide level so it can be implemented across all regions in the same manner.

**Question 6B.5 Would you support the development of an advisory Information Note or Appendix to Technical Booklets on Part F to support embodied carbon assessment?**

Yes

**Question 6B.6 Have you any practical suggestions for how circular economy principles may be best encouraged in construction or, if necessary, regulated for in the future?**

No Comment

## Section 6C: Over-sized new homes

**Question 6C.1 Have you any evidence on new-build dwelling sizes that should be taken into account in future policy making on larger dwellings?**

Elmhurst does not have any evidence in this area.

**Question 6C.2 Do you believe that action should be taken to better highlight the higher total energy demand for large, less spatially efficient dwellings? If so, how should this be best achieved?**

Elmhurst agrees this would be good information for an occupier. Elmhurst recommends this is displayed on the EPC in a comparison to a typical sized home so the occupier can clearly see the impact of a large, less spatially efficient home.

## Section 6D: Performance gap

**Question 6D.1 Do you have any particularly local evidence on design vs as-built performance gaps?**

No further details to add.

**Question 6D.2 Do you have any evidence or insight supporting specific actions to address specific performance gaps in Parts F or K of the Building Regulations?**

Elmhurst does not have any evidence in this area.

## Contact Details

Should you require any further clarification, please contact us at:



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