

Response ID ANON-CXDN-XVFP-H

Submitted to Future Homes and Building Standards 2023 consultation
Submitted on 2024-03-04 17:43:03

Introduction

What is your name?

Name:
Damon Hart-Davis

What is your email address?

Email:
d@hd.org

1 Scope of Consultation

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

Member of the public, Research/Academic organisation

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

g. London

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

d. Homeowner

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

Please provide the name of your business/organisation here.:

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

Not Answered

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.)

Please provide details here.:

Responding primarily as an individual with a very long-standing interest in this area, eg see my site:

<https://www.earth.org.uk/>

I am also a PhD student researching UK home heating decarbonisation at the University of Surrey.

2 Acronyms

3 Introduction

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)

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

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.:

Improved health for those otherwise potentially in fuel poverty or close to it.

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)

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

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

a. Option 1

Question 11 What are your priorities for the new specification?

carbon savings

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

5 Metrics

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?

b. Yes, and I want to provide views on the suitability of these metrics and/or their alternatives

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

I am concerned that purely floor-area based metrics (rather than per-occupant or blended metrics) do not incentivise people to live at all frugally in terms of space used. Given that more space to heat/cool inevitably requires more energy, AND that the UK continues to experience an apparent housing shortage, encouraging less profligate use of conditioned floor space per person seems a good goal. Heating unused second homes and mainly-empty nests 'efficiently' seems a poor second to keeping more people comfortable.

6 Updated guidance and minimum standards

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

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

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

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

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

a. Yes

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

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?

c. No (please provide justification)

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

There need to be enforced universal controls so that occupants really understand the implications (kWh / money) of their choices, especially where dynamic/ToU pricing of energy and flexibility of demand are increasingly required. (Nothing should stop additional better controls being provided and providing market differentiation and innovation, but the basic common set should be available at all times.)

Preferrably in co-operation with overlapping European markets to maximise influence on manufacturers, the UK should be insisting from heating/cooling appliance manufacturers at least a basic uniform consistent set of controls that all heat-generation appliances support, that also make clear the

costs/benefits of moving the time of demand, for well beyond the early-adopter segment. On the other side, understanding such controls should be covered as part of the school curriculum. Pretending heating is boring isn't going to fix that many people neither understand basic physics of their heating nor run their systems anything like optimally (and many of those current systems have been badly chosen and commissioned too). Newer more energy-efficient heating systems and tariffs will be increasingly complex; people will need help to operate them well. Circa 15% of current carbon emissions come from current domestic space heat, and even when fully electrified therefore a large chunk of UK/English future energy demand (and health) depends on getting people to operate this critical resource well, for their benefit and everyone else's.

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

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

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

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

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

Given personal experience I think that the litres capacity may be a little too high for a given daily kWh demand. I agree with avoiding oversizing, and this may still be doing so.

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

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

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

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

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?

Not Answered

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

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

a. Yes

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

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

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

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?

b. No

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

7 Material Change of Use

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

a. Yes

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

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?

Not Answered

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

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

a. Yes

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

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.

Please provide additional information to support your view.:

I am concerned that allowing floor area and part conversion to loosen the rules would encourage gaming of those rules, else under some circumstances I would add those as parameters.

Poor expertise is NOT a good reason to do a bad job with long-term consequences!

Whereas you are considering excluding PV for taller buildings because of a relative lack of available roof space, you should consider requiring it on non-significantly shaded vertical aspects such as opaque surfaces, especially on (near) south-facing aspects.

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

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:

not stretching enough

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

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?

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

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

Though I'd prefer a per-occupant metric to be added, to avoid profligate per-person use in spaces significantly oversized compared to nationwide area-per-person metrics.

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

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 there are real practical difficulties (eg more than double the per-kg CO2 costs of typical) or conversation/historical constraints, though possibly (for example) the developer should have to place a significant long-term bond against (contributing to) future energy costs to align their interests with long term interests of occupants and the planet.

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, other (please provide further details)

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

As above. Make the developer share (or entirely cover) the extra energy (etc) costs of relaxation.

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

a. Yes (please provide further details)

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

To reduce the misalignment of developer CAPEX and occupant OPEX incentives, and to provide minimum efficiency and health outcomes.

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)

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

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

b. No

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

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

b. Yes, and photographic evidence is needed

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

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

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

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

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

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

Airtightness testing, and verification of correct ventilation, for *every* dwelling (to avoid gaming and poor build detailing).

8 Real-world performance of homes

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

a. Yes

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

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.

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

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

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

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

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

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

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?

Not Answered

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

Question 45 Are you aware of any gaps in our guidance around commissioning heat pumps, or any third-party guidance we could usefully reference?

Not Answered

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

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?

Not Answered

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

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?

Not Answered

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

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?

c. No (please provide justification)

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

It is a good start.

The HUG has to work for people of lower educational attainment, and those who are busy and distracted and have little mental effort available, and those who are very stretched for cash, and tenants with dubious landlords, for example, as well as affluent middle-class university educated home-owners.

The HUG must not assume that all occupants have the same targets/goals for their systems generally or at all times. So for example templates of how to operate systems to broadly target saving money, simplicity, or maximising comfort (such as in Energy System Catapult heat-pump trials), and clear explanations of likely costs/benefits should be covered too.

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.

Not Answered

Please provide further details here. :

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)

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

Insisting on some standard common subsets/variants of controls (especially for heat pumps) available at all times on all models, tied to HUG elements on how to use them and explanations, could help enormously.

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.

Not Answered

Please provide justification here. :

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?

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

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

That information should be verified to be clear about the consequences of turning off such systems to attempt to save money or reduce noise.

9 Heat Networks

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

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

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?

Not Answered

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?

Not Answered

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

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

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

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

Please provide any comments here.:

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?

Please provide any comments here.:

10 Smart Meters

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?

Not Answered

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

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?

Not Answered

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? :

11 Accounting for exceptional circumstances

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?

b. No (please provide justification)

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

Unless the building owner / developer lays down a long term bond representing the extra future energy costs to avoid relaxation being gamed for a quick buck at the expense of the occupants and planet OR the relaxation is so painful to get (eg requires SoS sign-off) that it will not be gamed in practice.

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. :

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

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

If by 'submit' you mean 'publish'.

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.:

See answer to Q61: this should be truly exceptional IMHO. Climate change is an existential threat, and should not be gamed for the next quarter's profits.

12 Legislative changes to the energy efficiency requirements

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

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

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?

Not Answered

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

13 A review of our approach to setting standards

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

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

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

Please provide any comments here.:

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

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.:

Local weather for modelling is good.

Also, a combination of weather compensation at core required in standards AND not insisting on too tight a temperature regulation band, eg see this PREPRINT with this implication that having too 'stiff' a temperature control (or conversely downplaying per-room controls as an alternative) might affect electricity demand by +/- 15%:

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

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

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

Please provide any further evidence.:

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

a. Yes

Please provide any further evidence.:

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

a. Yes

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

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

Please provide any comments here.:

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

Not Answered

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

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

Please provide any comments here.:

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.

Please provide any comments here.:

14 Transitional Arrangements

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.

a. Option 1

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

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?

Not Answered

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

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

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

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.:

15 Part O – Call for Evidence

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

a. Yes

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.:

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

Not Answered

Please provide further information here.:

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?

Not Answered

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

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

Not Answered

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

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?

Not Answered

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

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?

Not Answered

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

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

Not Answered

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

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

Not Answered

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

Question 90 Does Regulation 40B require revision?

Not Answered

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

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

Not Answered

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

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

Not Answered

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

Question 93 Are there any omissions or issues not covered on page 90 with the statutory guidance in Approved Document O that we should be aware of?

Not Answered

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

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.

Please provide any comments here.:

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

Please provide any comments here.: