

March 2024



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# The Future Homes and Buildings Standards 2023 consultation

## Consultation response from The Housing Forum

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### About The Housing Forum

The Housing Forum is the UK's cross-sector, industry-wide organisation that represents the entire housing supply chain. Our growing membership is drawn from over 150 organisations across the public and private sectors and includes local authorities, housing associations, housebuilders, architects and manufacturers. All share our determination to drive quality in the design, construction and decarbonisation of UK homes. They have a commitment to partnership working and share in our vision of 'A Quality Home for All'.

In order to achieve this, we have advocated for policy change needed for everyone to live in a good quality, sustainable and affordable home. Our key [Housing Solutions](#) set out how we think this can be achieved.

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## Introduction

At The Housing Forum our members share our determination to drive quality in the design, construction and decarbonisation of UK homes. They have a commitment to partnership working and share in our vision of 'A Quality Home for All'. We therefore welcome the Government's commitment to delivering warm, safe and decent homes in setting these new standards for Future Homes.

Upfront costs, running costs and eliminating carbon emissions are all important to our members across the housing sector. We welcome the approach to balancing these priorities. The key points we would like to make in response to the consultation are:

- The consultation suggests that the increased costs will be passed on to landowners via lower land prices, but we believe this does not always apply – especially in weaker housing markets, challenging brownfield sites or sites that are already owned by housebuilders or social landlords when the new standards come into effect. Social landlords do not currently have any capacity to charge higher rents for housing that is more energy efficient, so the full costs of meeting the higher standards will fall on their own budgets. **This means that the grant for social housing will need to be increased to cover the additional upfront costs.**
- We are broadly **supportive of the more ambitious Option 1** (higher upfront costs and lower energy use) but have **some concerns around the real-world performance of mechanical cooling**, which may not be needed in all areas and can cause problems with noise in urban areas. Passive cooling systems such as shading may be more appropriate in some areas.
- We are aware of concerns around the **transitional timescales**, particularly that the new HEM must be fully operational before the regulations come into effect. There are concerns about the capacity of the heat pump industry and with the skills needed to fit mechanical ventilation, as well as with the capacity of the grid system. A **coordinated approach** is needed between government departments to ensure that the grid system can cope with the requirements of the Future Homes Standard and also with other policies that increase electricity demand (such as electric vehicles, retrofitting heat pumps to existing homes and new data centres).
- The priority for the Future Homes Standard should be to ensure that new housing can be zero-carbon ready. However, the cost of heating homes is a critical one – particularly to our social housing provider members – as high costs are a big problem for low-income households. It is therefore critical that the government takes action to ensure that electricity is affordable to all. This could be done via a range of different means such as **removing the green tariffs** and other charges from electricity bills and ensuring that welfare payments are sufficient to support lower income households.
- We would like to see a **more ambitious approach to post-occupancy evaluation**, with joint working between housing providers and developers to share lessons learned and promote a culture of continuous improvement.

Futureproofing and long-term sustainability are critical. The Future Homes Standard needs to ensure that homes are easy and cost-effective to maintain and should not require any foreseeable refurbishment for at least 20 years.

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# Response to questions

## Basic information

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

- National representative or trade body

[The Housing Forum](#) is the UK's cross-sector, industry-wide organisation that represents the entire housing supply chain. Our growing membership drawn from over 150 organisations across the public and private sectors and includes local authorities, housing associations, housebuilders, architects and manufacturers. All share our determination to drive quality in the design, construction and decarbonisation of UK homes.

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

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

Our head office is in London, though our membership comes from across the UK.

### 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: Anna Clarke
- Your position (if applicable): Director of Policy and Public Affairs
- The name of organisation (if applicable): The Housing Forum
- An address (including post-code): 1 Minster Court, Mincing Lane, London EC3R 7AA
- An email address: [Anna.clarke@housingforum.org.uk](mailto:Anna.clarke@housingforum.org.uk) or [info@housingforum.org.uk](mailto:info@housingforum.org.uk)
- A contact telephone number: 07442 405513.

## Performance requirements for new homes

### 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)

- low capital cost
- lower bills

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carbon savings

other (please provide further information)

All three of these are important to our members across the housing sector, including the affordable housing sector where additional capital costs must come from additional grant. The priorities for the Future Homes Standard should be ensuring that new housing can be zero-carbon ready. It will then be the government's responsibility to ensure that the price of electricity is affordable to all. This could be done via a range of different means such as removing the green tariffs and other charges from electricity bills, increasing electricity supply and ensuring that welfare payments are sufficient to support lower income households.

Other priorities include comfort, real-world performance including ease of use by residents, indoor air quality and minimising the additional strain on the grid system at peak times.

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

At The Housing Forum, our members are broadly supportive of the higher cost – higher carbon and bill saving Option 1. We see very strong support for PV panels (with a few possible concerns about the feasibility of 40% area for all roof types) and for wastewater heat recovery. Both of these will help to offset the higher costs of electricity, given the decision not to increase insulation standards any further.

Solar PV in particular will help to protect the occupant against fuel bills particularly with the move to electrification of heating, reduce demand on the national grid and would also help support the use of electric vehicles. Many homes being built under Part L 2021 already include photovoltaic panels. Some of the Housing Forum's members have been leading the way with solar PV – for instance, Cross Keys Homes has fitted solar panels on 65% of their homes, and saw a positive impact on residents' bills, alongside helping with the drive towards net zero.

Option 1 is helpful for developers (including many social landlords) who already want to go further on energy efficiency, for instance by including solar panels, because the higher build costs will be faced by everyone, pushing land values down and helping them to remain competitive.

The mechanical ventilation included within Option 1 is more challenging because an effective system relies on consumer behaviour with real-world performance not always matching the modelled impact. There are also concerns about whether cooling is needed in all parts of the country, and over noise of mechanical ventilation in urban areas. We are also aware of some concerns about the viability Option 1 in weaker housing markets, where the additional costs may make some housing unviable and flexibility over mechanical ventilation may be one way to ensure that housebuilding does not become prohibitively expensive, especially in areas where it may be replacing older very inefficient housing.

There are a variety of views about the costs presented – some of our members have expressed optimism that costs should fall as the sector gears up to the new standard. Conversely, a sudden peak in demand for skills and materials required for the new standard could push costs up, in the short term. A longer transitional period would

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help with this. We are also aware of some concerns about the whole-life costs of the newer technologies involved in the Future Homes Standard (especially Option 1). Solar panels, for instance, will need replacing several times over the lifespan of a house.

Futureproofing and long-term sustainability are important. Buildings should be easy and cost-effective to maintain and should not require any foreseeable refurbishment for at least 20 years.

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**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?**

- 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.**

We are concerned that heat networks do not always perform as efficiently in practice as they are modelled to do and support Government initiatives to regulate the heat network industry.

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

No answer

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

No answer

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

Whole life costing should be applied to the specification of heat networks to ensure that the balance of capital cost and low bills benefits the building owners and residents over the long term.

## Metrics

**Question 12. Do you agree that the metrics suggested above (TER, TPER and FEE) be used to set performance requirements for the Future Homes and Buildings Standards?**

- No, I think delivered energy should be used.

Delivered energy should be the primary metric in the future. It should include an estimate of unregulated energy, so that it provides a full estimate of total energy use and total CO2/square meter.

TER and TFEE metrics are well 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 the Building

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Regulations and should result in buildings that are low carbon, low energy, and have low fuel bills. We have concerns about the FEE and think it would be easier to understand if it focussed on space heating demand.

## 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?**

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

We agree with the proposed changes, but would like to see more detail on the provision of hot water controls to allow residents to reduce the costs of heating water. This is particularly important as electricity is considerably more expensive than gas for hot water heating, and does not enjoy the efficiency savings that heat pumps generate for space-heating, meaning that water heating will become a bigger component of households' bills in future.

We are also aware of concerns about the assumed losses from heat networks and whether these are appropriate for all types of heat network (including lower density areas).

### **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?**

- Yes

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

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

Fixing instructions to units is helpful, but occupants and landlords should also have the information supplied electronically in home user guides. This should include a link to online information, which can be updated if necessary. A weblink and QR code should be included in the hard copy that is left in the home.

### **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?**

- No (please provide justification)

The guidance needs to be clear that the information must be given to the owner in both hard copy and electronically, with instructions on how to pass it on to the occupant where relevant (eg when the property is let to tenants).

Material should be road-tested on the public before use, to ensure that it is easily understood by everyone. People moving into a new home have a lot to take in, so a

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simple user-guide is essential, with more detailed information available as and when needed.

**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?**

- Yes

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

- No (please provide justification)

Some of our members have raised concerns that the sizing methodology might not result in sufficiently sized hot water tanks if the house is occupied with two people to a bedroom (eg two parents in one bedroom and 1-2 children in each other bedroom). This is particularly important for social housing which is typically allocated to the 'bedroom standard' with no spare bedrooms.

Placing restrictions on the size of hot water tanks may also inhibit innovation.

**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?**

- Yes

**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?**

- Yes

**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?**

- Yes

**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?**

- Yes

**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?**

- Yes

**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?**

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- No

## Material change of use

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

- Yes

**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?**

- Yes

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

- Yes

**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.**

Other factors include the type of residents – such as older people in care homes, and the age of the building.

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

- 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:**

- too stretching
- not stretching enough
- not economically viable
- not practical/technically feasible
- other (please provide further details)

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We are aware of concerns that the airtightness of 5 in MCUs will be impossible to achieve in many existing buildings where the junctions between elements cannot be effectively sealed. A realistic figure would be considerably higher (eg 10).

Those developing existing buildings do not always know what is inside the walls, roof or floor so cannot accurately estimate the U-values and infiltration rates that are the basis of these metrics. It would be impractical or excessively time consuming to model the u-values. There is no point carrying out complex calculations and modelling of buildings when the assumptions they are based on may not be accurate.

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**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?**

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

See answer to Q12. Delivered energy may be a more appropriate metric as this brings opportunity for low carbon heating alternatives where heat pumps or heat networks may not be suitable.

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

- Building control bodies should be able to relax under the following circumstances (please provide further details)

Building control bodies should be able to relax the standards for listed buildings, buildings in a conservation area or other circumstances where it may not be feasible to comply with the standards. For instance, a building with stone floors may be unsuitable for floor insulation.

It should also be varied where only part of a building is being converted to flats (meaning a deviation from the whole-building approach may be necessary).

New homes that are created via relaxed standards and do not comply with the Future Homes Standard for new homes should be clearly marketed as such (eg as refurbished homes, not newbuild).

**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)

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

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- Yes (please provide further details)

Minimum limiting standards for building fabric performance may need to be retained as far as possible and reviewed to ensure poor quality conversions are not built. A basic set of limiting standards could help safeguard against condensation and mould.

**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)

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

- No

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

- Yes, and photographic evidence is needed

**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?**

- Yes

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

- Yes

## Real world performance

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

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

Post occupancy performance testing should be voluntary. However there may be opportunity to carry out some tests post-completion but prior to occupation, when it is less disruptive to ensure that homes are performing as they should be and could be mandatory (for instance on a sample of new homes). This could include using tests from companies like Build Test Solutions and Veritherm that can confirm the overall thermal performance of a home.

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Government support for joint working with social landlords and developers would help post-occupancy evaluation to provide valuable insights into real-world performance and drive continuous improvement across the sector. This could include the use of smart meter data (while maintaining resident data protection). Grant could be tied to participation in POE to incentivise this. More could also be done to encourage sharing of lessons learned between different housing providers and housebuilders.

**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.**

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

We see value in a quality mark confirming performance testing to the new standard. We would recommend not using the phrase "Future Homes" as branding because this could become confusing if standards are changed again in the future. The branding needs to be clear and not confused with EPC ratings or other certification.

**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?**

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

This will help ensure ventilation systems are properly installed and used correctly by 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?**

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

Independent testing by a member of a competent persons' scheme should be required for any new ventilation systems to ensure adequate design and functioning and this should be shared to the building owner and the occupants.

**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?**

- Yes

**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

**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?**

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

It is important to ensure batteries are located where they will not overheat and on other ways to prevent fires from batteries. Battery fires can be sudden and fierce, as illustrated by some of the recent examples of e-bikes being charged indoors and leading to fires. Householders may not be used to large batteries in their home and know how to prevent or deal with a fire.

**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?**

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

Self-certification has worked well for double glazing so the same principle should apply to heat pumps and mechanical ventilation systems.

**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?**

- Yes

**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.**

We understand that most of our members who are domestic developers already use the Home User Guide template, though are also aware of some concerns about residents moving into new homes where the Home User Guide is lacking.

**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.**

- Yes, (please provide further details).

We would like to see a variety of formats for the Home User Guide, recognising the different needs of different occupants and need to ensure that information can be updated and passed from one occupant to another. For rented housing there is a need for both the occupant and the landlord to have the information. Formats should include:

- Fixing instructions to units and other places within the home.
- Electronic information (eg a PDF) supplied to both occupant and landlord.
- Ensuring that Home User Guides are held on a national database so that they cannot be lost if, for instance, a housebuilder goes out of business.
- A weblink and QR code for updateable online information. Centralised storage would protect against developers going out of business.

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- Video formats for people to watch and learn how to use the features of their home.
- A list of Maintenance Companies to approach
- A face-to-face discussion/handover between the housebuilder and the owner (and for rented housing, between landlord and each new tenant moving in). This means that sales teams need to be fully briefed on the operation of the home.

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**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.**

- Yes (please provide justification)

We are aware of issues with enforcement and non-compliance.

**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?**

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

We agree that there needs to be a check that the information is available before completion. This should require the information to be both in hard copy and electronically (enabling both landlord and tenant to have access for rented housing). Clarity is needed over situations where completion takes place prior to the occupant being known or available for handover.

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## 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?**

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

This should be permitted as long as the heat network can accommodate the demand without breaching carbon emission targets.

Clarity is needed over how the plans for heat network zoning align with the requirements of the Future Homes Standard, especially in areas identified as suitable for heat networks but where there is not yet a heat network in operation.

Individual billing based on metered consumption should be a pre-requisite for adding new homes to a heat network, as there is no incentive for occupants to use heat efficiently if they are not billed for it, resulting in high costs for everyone, including those who cannot afford it.

**Question 54. Do you agree that newly constructed district heating networks (i.e., those built after the Future Homes and Buildings Standard comes into**

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**force) should also be able to connect to new buildings using the sleeving methodology?**

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

We are aware of some concerns around the robustness of the sleeving methodology. Clear pathways heat networks to decarbonise are needed, reviewed by independent experts.

**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?**

- No (please provide justification)

We are in support of the "sleeving" concept in principle.

However, the proposed methodology for heat networks requires matching the diversified peak loads of customers with the plant capacity. This will require additional generation plant capacity to try time match the generation with this diversified load, adding to the capital cost. Using diversified peak loads (which adds the time-based approximations) is not a requirement for other parts of the electricity industry, so we are aware of concern that the proposed methodology is putting a higher requirement on the heat network industry than others operating in the same market, which could unnecessarily discourage the adoption of heat networks.

**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?**

- No.

It would be sensible to add new homes to a heat network that is not yet using low carbon fuels as long as it has a clear plan for how to do so in the near future (eg over the next ten years). This is no different from allowing other new homes to use electricity, even though the grid is not yet fully decarbonised. The government needs to ensure close alignment with plans for heat network zoning to ensure that new homes continue to be built in all types of area. It would be expensive and inefficient to install a heat pump to a new home, only to remove it a few years later in order to connect to a heat network. Heat network providers need certainty over future customers in order to grow.

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

There needs to be regulation of heat networks to monitor the energy source and efficiency of the network. It is also important for government to promote the use of waste heat from local industry and other local resources and to incentivise those with waste heat to make it available to heat networks. A locally led approach to this should help to build community engagement in the decarbonisation process.

The Future Homes Standard, plans for heat network zoning and the Heat Network Technical Assurance Scheme must be aligned with one another.

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**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?**

The Future Homes and Building Standards is attempting to deal with energy and carbon factor arrangement for heat networks, which might be better covered under the remit of DESNZ. This would treat it in a comparable fashion to the carbon content of the electricity grid supply.

Housing associations and housebuilders are often nervous of heat networks because the lack understanding of their carbon savings, and also find that the legal arrangements covering billing and maintenance can be more complex. It is important to ensure that the regulatory regime for heat networks does not inadvertently give heat networks the appearance of being higher risk and potentially creating a barrier for heat network adoption.

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## Smart meters

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**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?**

- Yes

**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?**

- Yes

## 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?**

- Yes

**Question 62. [If yes to 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?**

Areas participating in hydrogen trials would be an example, though in the longer-term hydrogen should be produced from green sources and therefore no exception would be needed.

Another example might be where alternative site-based renewable generation is supporting what is – overall – a net zero development.

We are aware of some concerns about the grid system having the capacity to support new housing alongside other increases in demand from electric vehicles,

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data centres and existing homes being moved to heat pumps. It would be very much preferable for government to ensure that the grid system *does* have sufficient capacity to support new housebuilding to the Future Homes Standard in all locations. However, if there are exceptional circumstances where this is not feasible, alternatives such as HVO fuel might be considered. Strong safeguards would need to be in place to ensure that these are truly exceptional cases.

**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?**

- Yes

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

Clear guidance is needed with a definitive list of scenarios where a relaxation, in order to prevent pressure on local authorities to relax the criteria in other circumstances just because they are harder to comply with. This would help ensure that any such relaxations are unusual and reasonable, with policing and sign-off at a high level to ensure that this is genuinely exceptional, given the importance of moving to zero carbon fuel sources.

A quality audit and accountability process should be put in place. Where a relaxation is granted then the reasons for this decision should be made public by the local authority. This would increase transparency and help ensure that any exceptions are applied on a consistent basis across the country.

Monitoring at a national level is also vital to ensure that relaxations due to insufficient grid capacity result in longer-term plans to ensure the grid becomes sufficient and these situations remain very rare.

## 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?**

- Yes

**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?**

- Yes

## Reviewing the approach to setting standards

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**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?**

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

We agree that the HEM should be adopted, but are concerned that it must be in a usable state before the Future Homes Standard comes into effect. There is a lot of concern that, given the past history of SAP upgrades and the fact that HEM is very new and very different, that this will not be the case. Government should work closely with industry to ensure that the HEM is fully operational *from a user perspective* before the new regulations come into effect, and that there has been sufficient time to recruit or train up people with the skills required to use it.

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

Our members have expressed concern that the notional PV array is too optimistic and not all homes will be able to comply due to orientation and roof sizes/arrangements. If PV arrays are beyond the 3.68 kW threshold for grid connections this could mean the connection is refused or additional work is required.

The orientation of the PV array on the notional building should be either returned to the value in Part L 2021 (southeast/southwest) or be the same as the orientation of the actual dwelling. This would make achieving Option 1 more feasible for homes without large south facing roofs.

The set up also appears to limit innovation as it assumes the use of heat pumps or heat networks. For instance, some smaller flats not in a heat networks zone - if well insulated – could be heated effectively via storage heaters, which may help with the peak demand issue facing other forms of electric heating.

The notional building methodology also pays insufficient attention to passive design features such as reducing the heat loss envelope, or using orientation to support passive heating or cooling. These are most likely to be useful for those building flats or terraced housing, which should be encouraged as they are more energy-efficient house-types.

**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?**

- 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.**

We are aware of some concerns with using local weather conditions affecting the ability of national housebuilders or heat pump operators to model the performance of heat pumps across the country.

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However, overall, there is support for using local weather data to ensure that the right solution is found for dwellings in different parts of the country.

**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?**

- Yes

**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?**

- Yes

**Please provide any further evidence.**

This would help ensure that the PV potential of the roof is maximised, reduce the risk of water leakage around the chimney and prevent installation of solid fuel burning devices by the occupants. Clear rules would also help prevent planning authorities from requiring chimneys on new houses (which is sometimes done so that they fit in with the character of the area).

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

- No

**Please provide any further evidence.**

We are concerned that the small increase in accuracy from the proposed approach will not offset the additional time needed to assess it. It will substantially increase the time needed for energy assessors to enter data into the HEM calculations, which already is more complex than SAP. The removal of the '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 from smaller manufacturers, which could place further strain on the supply chain.

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

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

Standard details should be available for houses and apartment blocks to avoid the need to frequently model thermal bridging at junctions.

Calculated bridges should be used to help bridge the performance gap. Any heat loss through thermal bridging could vary significantly from default y-values.

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

- No

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

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No response

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

No response

**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.**

No response

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## Transitional arrangements

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

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- Option 2

The Housing Forum believes that a six month period is too short and a 12 month period would therefore be preferable for the following reasons:

- Design can be a lengthy process.
- The sector is still adjusting to the relatively recent impact of the 2021 regulations.
- There are concerns about the capacity of the heat pump industry and with the skills needed to fit mechanical ventilation which need to be addressed. Poorly fitted ventilation can lead to damp and mould, and poorly fitted heat pumps can lead to noise, poor efficiency and high bills. Close coordination on policy to encourage retrofitting of existing homes is needed, as this will require much of the same supply chain and skills.
- The increased electricity demands of new housing built to the new standard also have implications for the grid system, so the energy sector will also need time to ensure that the demands can be met (eg via more substations). This is especially an issue for larger housing developments, or where there are high rates of retrofitting and/or electric vehicles nearby adding to pressure on the grid.
- A sudden increase in demand for new building materials and parts could cause a price hike

We are aware of some concern that even a 12 month period will be challenging.

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

The transitional period needs to start from the point at which the full technical regulations are published, including a fully functional version of the new HEM regulations.

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**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?**

- Yes

This depends on the transitional arrangements. If housing that already has planning permission at the point when the new regulations are published is exempt from the new regulations, then there should be no need to amend any existing permissions. If a different point in time is used, then there may be a need to amend some planning permissions to permit heat pumps or PV panels because of the perceived visual impact or noise. The planning system could support the new standard by allowing heat pumps and rooftop PV panels in all circumstances (including in conservation areas) without the need to amend existing consents.

**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?**

- Yes

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

The Housing Forum supports driving up the quality of our homes and it is therefore not appropriate to be building homes to standards that are over 10 years old. We believe that a line needs to be drawn to close down transitional arrangements to prevent homes being built that will require significant retrofitting to become zero carbon ready. The transitional arrangements for the new Future Homes Standard could also include a date by which all new homes will need to comply, irrespective of when they were started to help prevent any gaming of the system.

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

- 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.**

Part O should apply by default, but with Building Control bodies able to relax the standards for listed buildings, where it is not technically feasible to comply with the standards.

We would suggest that PAS2035 is used for MCU projects. There are existing standards and guidelines created for retrofit projects (PAS2035) to bring dwellings to a high energy efficiency level. Using these would reduce future retrofitting requirements.

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

- Yes

We are concerned that the forced use of mechanical cooling may not be needed in all areas and can cause problems with noise in urban areas, especially if used at night. There may also be security issues with ground floor bedrooms.

**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?**

- Yes

Heat is gained from a conservatory (via the greenhouse effect) which can over-heat the rest of the dwelling if the doors to the conservatory are left open.

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. Conservatories can therefore increase the risk of overheating. Conservatories are currently exempt from Part L/O where thermally separated from the existing home, but in practice thermal separation does not always prevent the overheating.

**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?**

- No

**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?**

- Yes

Further guidance is needed on how ceiling fans should be modelled.

**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?**

- Yes, (please provide justification)

We are concerned that the forced use of mechanical cooling may not be needed in all areas and can cause problems with noise in urban areas, especially if used at night. Passive cooling systems such as shading may be more appropriate in some areas.

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

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- No

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

- No

**Question 90. Does Regulation 40B require revision?**

- Yes

This could be clearer regarding properties that where the owner is not the occupant – such as those where a developer takes on ownership prior to sales, or where a housing association or landlord owns properties which are then let to a tenant.

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

- Yes

This could be clearer regarding properties that where the owner is not the occupant – such as those where a developer takes on ownership prior to sales, or where a housing association or landlord owns properties which are then let to a tenant.

The building control authority should require sign-off that the information has been provided as required.

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

- No

**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?**

- Yes

**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.**

We are concerned that the forced use of mechanical cooling may not be needed in all areas and can cause problems with noise in urban areas, especially if used at night. There may also be security issues with ground floor bedrooms. Passive cooling systems such as shading may be more appropriate in some areas.

**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.**

The issue of how the higher costs of the Future Homes Standard will be paid for will impact on the affordable housing sector, and therefore on the housing available to people with protected characteristics who are more likely to depend on social housing. These include women, people from most non-white ethnic groups, children

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and disabled people. To avoid a negative impact on these groups, it is important that grant rates for social housing are increased to cover the additional costs.

The consultation suggests that the increased costs will be passed on to landowners via lower land prices, but this does not always apply – especially in weaker housing markets, challenging brownfield sites or sites that are already owned by housebuilders or social landlords when the new standards come into effect. Social landlords do not currently have any capacity to charge higher rents for housing that is more energy efficient, so the full costs of meeting the higher standards will fall on their own budgets.

There are also concerns about the impact on lower income groups (which are disproportionately families, women, and BME groups) from being solely reliant on electricity for all their power needs, leaving them vulnerable to price increases.

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

No response

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