

## Response ID ANON-ZJG1-F21T-S

Submitted to Building Regulations: Determining the principles for a Scottish equivalent to the Passivhaus standard: Stage 1 consultation  
Submitted on 2024-10-23 18:43:23

### Consultation proposals

1 Do you broadly agree with the statements on what 'equivalent' should not mean, in delivery of amended building standards to address energy and environmental performance?

Yes

In the text box below, please provide information on why you agree or disagree or if you consider other actions need to be considered.:

2 Do you broadly agree with the statements on what 'equivalent' should require consideration of, in delivery of amended building standards to address energy and environmental performance?

Yes

In the text box below, please provide information on why you agree or disagree or if you consider other actions need to be considered.:

### Proposed components of the standard: design

3 On the basis that the Home Energy Model (HEM) and Simplified Building Energy Model (SBEM) are reviewed and shown to report representative outcomes, do you support the continued use of calculation tools which implement the UK methodologies?

Yes

In the text box below, please provide information on why you agree or disagree or if you consider other actions need to be considered, including your experience of PHPP as a calculation tool. :

4 Do you support retention of the current approach and the setting of relative performance targets for new buildings through an approved calculation methodology?

Yes

In the text box below, please provide information on why you agree or disagree or if you consider other actions need to be considered.:

5 Do you agree with the proposal to retain delivered energy, covering only regulated energy use, as the main compliance metric for targets set under standard 6.1 (energy demand)?

Yes

In the text box below, please provide information on why you agree or disagree or if you consider other actions need to be considered.:

6 Do you support further consideration of the introduction of a prescriptive space heating demand limit for new buildings through building regulations?

No

If you answered 'Yes', in the text box below, please provide information on what form of prescription you would support and the potential benefits and/or risks this may create.:

7 Do you support the move to application of regional climate data within the approved calculation methodologies and their application within compliance targets?

Yes

In the text box below, please provide information on why you agree or disagree or if you consider other actions need to be considered.:

8 Do you currently deliver new buildings that exceed 'backstop' values for fabric performance set under standard 6.2 or those used to define the notional building in guidance to standard 6.1?

No

If you answered 'Yes', in the text box below, please provide information on the solutions you apply, any challenges experienced and your views on wider application of such solutions. :

9 Do you have any particular views on limiting fabric infiltration through the building standards?

No

If you answered 'Yes', in the text box below, please provide your views and any supporting information on the benefits and risks arising from greater prescription on this topic. :

10 Do you have any particular views on the means by which effective ventilation of new buildings is best achieved?

No

If you answered 'Yes', in the text box below, please provide your views and any supporting information on the benefits and risks identified in the delivery of your projects. :

11 Specifically for new homes should further guidance be given on Mechanical Ventilation with Heat Recovery (MVHR), generally, and through the Technical Handbooks?

No

If you answered 'Yes', in the text box below, please describe what approach to this work you consider would be most appropriate in driving forward informed, good practice on both energy and ventilation performance.:

12 Are there areas of newbuild design and specification you would wish to highlight as potential risks to occupant comfort that should be better addressed through the building standards?

Yes

If you answered 'Yes', in the text box below, please provide examples of the issues encountered and, where available, the solutions employed to address the problem.:

With regard to occupant comfort, we believe that further guidance will be required within a future revision of the Building Regulations on the issue of overheating and noise. While the current version of the relevant standard (3.28.4 Practicality of mitigation measures) makes reference to consideration of "environmental factors" including "noise from the immediate environment", there is no accompanying guidance on the assessment methodology, or any minimum requirements offered therein.

Future revisions of the standard could either make reference to a number of relevant guidance documents, or indeed prescribe a minimum requirement for indoor ambient sound levels in different buildings/rooms (in particular noise-sensitive rooms, e.g. bedrooms at night). As an example, Approved Document O (Overheating) of the Building Regulations in England, sets out limit values for night time noise within bedrooms. These limit values provide a guide on restricting window openings and considering alternative means of removing excess heat, e.g. via ventilation louvres. ADO also makes reference to the Association of Noise Consultants' guidance document Acoustics, Ventilation and Overheating: Residential Design Guide (2020). AVOG outlines an integrated, two-stage assessment method for overheating and noise risk, which additionally takes into account the frequency and duration of the overheating conditions to assess any noise impact. It is also understood that BS 8233 'Guidance on sound insulation and noise reduction for buildings', which is currently under review, in its future iteration will contain guidance on the matter.

Furthermore, the consultation proposals make reference to services/ventilation noise for which the Passivhaus standard sets a limit of 25/30dB(A) depending on the type of building/room. While it is not clear, whether the Scottish equivalent standard will also outline maximum services/ventilation noise limits, we would strongly advise that the Stage 2 consultation provides further detail on this, as it can influence the occupants' appropriate use of the system, e.g. if they find that ventilation systems produce excessive noise.

As standard 3.28 states, the above issues would also typically be considered and addressed during the planning process for any development. It is therefore important that any update to the Building Regulations should be aligned with existing planning guidance in order to ensure that these are compatible.

13 Do you consider that Passivhaus Certification offers a feasible alternative means of compliance with standard 6.1 (energy demand)?

Yes

In the text box below, please provide information on why you agree or disagree and on the extents to which this alternative might be usefully applied in practice.:

14 Are there any other comments or observations you wish to make on the proposed components of the review which relate to building design?

Yes

If you answered 'Yes', in the text box below, please provide your further comments or observations. Additional supporting information may also be provided by uploading a separate document below.:

With regard to the design and specification of building services, where these are found to be required for ventilation/cooling/heating, we would advise that the Stage 2 consultation contains further detail and guidance on acceptable sound levels generated by these systems. These could be limiting, absolute (A-weighted) sound levels, as is the case with the Passivhaus standard, or set as a noise rating curve (NR) which are common for assessing internal limits of building services noise.

As stated previously, excessive noise levels from mechanical services not only can have a harmful effect on the occupants' acoustic comfort, but also might result in occupants avoiding the use of mechanical services as designed, which in turn can cause other issues, i.e. overheating, poor air quality etc.

Please upload your file by clicking the 'choose file' button below.:

No file uploaded

Proposed components of the standard: compliance

15 Do you currently apply an in-house or third party compliance management process to your projects which specifically addresses energy and environmental project elements?

No

If you answered 'Yes', in the text box below, please provide information summarising your approach and the key benefits you derive from its application in practice.:

16 From your experience of delivering very low energy buildings, what are the most common risks identified at an early design stage and how are they managed most effectively?

Please provide your response in the text box below.:

17 Do you consider there are practical limits to effective risk management at design stage alone and can you give examples of where management of risk is more effective at a later (construction) stage?

Please provide your response in the text box below.:

18 Do you currently apply a particular approach to the recording of project information during construction that can demonstrate, to a third party, that work complies with energy-related aspects of building regulations?

No

If you answered 'Yes', in the text box below, please provide information summarising your approach and the key benefits you derive from its application in practice.:

19 Do you currently compile and report summary information on the completed building as part of a handover record of project information that goes beyond what is currently required by building regulations?

No

If you answered 'Yes', in the text box below, please provide information summarising your approach and the key benefits you derive from its application in practice.:

20 Do you have experience of implementing methods to effectively de-risk the very low energy building aspects of design and construction and provide assurance that compliant solutions are properly considered and delivered as intended?

No

If you answered 'Yes', in the text box below, please provide information summarising your experience.:

21 Do you consider the proposals set out present a reasonable summary of the drivers for improvement in compliance processes to deliver very low energy buildings?

Yes

In the text box below, please provide information on why you agree or disagree and on any drivers for improvement you consider particularly important.:

22 Do you consider the proposed scope of application and recommended actions are appropriate to address the effective delivery of very low energy buildings?

Yes

In the text box below, please provide information on why you agree or disagree and on what other actions you consider may be useful in driving compliance.:

23 Do you support the application of provisions from an early (pre-warrant) design stage through to completion and handover of the building?

Yes

In the text box below, please provide information on points in the process you consider there may be a need for particular emphasis on action to manage the risk of failures in compliance.:

24 Do you have any views on the key areas where the verification process should focus, to be effective in responding to an enhanced compliance reporting regime?

If you answered 'Yes', please provide your views in the text box below.:

25 Do the recommendations presented adequately describe action to affect the key roles and responsibilities of those who contribute to building compliance?

Yes

In text box below, please provide any additional information on anything else you consider to be relevant to the actions of such parties.:

Call for information on current standards

26 Are you currently designing buildings to the February 2023 standards and have confirmed specifications, which are at a stage that have been or will be used in a building warrant application, that you are happy to share with us?

No

If you answered 'Yes', please email calculation output sheets which detail your building specification(s) to [buildingstandards@gov.scot](mailto:buildingstandards@gov.scot) with the subject title 'Call for evidence – February 2023 design specification'. Alternatively, please upload any relevant data below.:

Please upload your file by clicking the 'choose file' button below.:

No file uploaded

27 With regards to the current approach to target setting and overheating risk, do you have experience related to either of these two issues you consider useful to inform review of the current published guidance or this review of current energy and environmental standards?

No

If you answered 'Yes', in the text box below, please summarise your experience(s).:

28 Have you undertaken any projects under the post-2023 energy standards which considered connection to a new or existing heat network, both district heat networks and communal heating systems?

No

If you answered 'Yes', in the text box below, please provide any information you consider influenced the outcome of those projects, with reference to the type of system (district or communal) and the impact of current energy targets in particular.:

If you answered 'No', in the text box below, please confirm the reason for not considering a heat network solution.:

Non applicable to the consultees' discipline.

29 Do you have experience of issues affecting development which you consider have arisen from application of the current energy and environmental standards set under building regulations?

No

If you answered 'Yes', in the text box below, please provide information summarising your experience.:

Proposed delivery programme

30 Do you agree with the proposal to mandate the standard in 2028, introducing changes initially as a voluntary standard from 2026?

Yes

In the text box below, please provide information on why you agree or disagree or if you consider other options need to be considered.:

About you

31 What is your name?

Name:

Eleni Kontesidou

32 Are you responding as an individual or an organisation?

Organisation

33 What is your organisation?

Organisation:

Institute of Acoustics

34 Further information about your organisation's response

Please add any additional context:

The response was informed by an online, open discussion with members of the Scottish Branch of the Institute of Acoustics and feedback collated from members.

35 The Scottish Government would like your permission to publish your consultation response. Please indicate your publishing preference:

Publish response only (without name)

36 Do you consent to Scottish Government contacting you again in relation to this consultation exercise?

Yes

37 What is your email address?

Email:

e.kontesidou@napier.ac.uk

38 I confirm that I have read the privacy policy and consent to the data I provide being used as set out in the policy.

I consent

Evaluation

39 Please help us improve our consultations by answering the questions below. (Responses to the evaluation will not be published.)

Matrix 1 - How satisfied were you with this consultation?:

Slightly satisfied

Please enter comments here.:

Matrix 1 - How would you rate your satisfaction with using this platform (Citizen Space) to respond to this consultation?:

Slightly satisfied

Please enter comments here.: