

# Proposed Domestic Building Environmental Standards (Scotland) Bill

## Introduction

A proposal for a Bill to introduce new minimum environmental design standards for all new-build housing to meet the Passivhaus standard or a Scottish equivalent in order to improve energy efficiency and thermal performance.

The consultation runs from 4 May 2022 to 27 July 2022

All those wishing to respond to the consultation are strongly encouraged to enter their responses electronically through this survey. This makes collation of responses much simpler and quicker. However, the option also exists of sending in a separate response (in hard copy or by other electronic means such as e-mail), and details of how to do so are included in the member's consultation document.

Questions marked with an asterisk (\*) require an answer.

All responses must include a name and contact details. Names will only be published if you give us permission, and contact details are never published – but we may use them to contact you if there is a query about your response. If you do not include a name and/or contact details, we may have to disregard your response.

Please note that you must complete the survey in order for your response to be accepted. If you don't wish to complete the survey in a single session, you can choose "Save and Continue later" at any point. Whilst you have the option to skip particular questions, you must continue to the end of the survey and press "Submit" to have your response fully recorded.

Please ensure you have read the consultation document before responding to any of the questions that follow. In particular, you should read the information contained in the document about how your response will be handled. The consultation document is available here:

[Consultation Document](#)

[Privacy Notice](#)

I confirm that I have read and understood the Privacy Notice which explains how my personal data will be used.

## About you

Please choose whether you are responding as an individual or on behalf of an organisation.

Note: If you choose "individual" and consent to have the response published, it will appear under your own name. If you choose "on behalf of an organisation" and consent to have the response published, it will be published under the organisation's name.

an individual

Which of the following best describes you? (If you are a professional or academic, but not in a subject relevant to the consultation, please choose "Member of the public".)

Member of the public

Which of the following best describes you? (If you are a professional or academic, but not in a subject relevant to the consultation, please choose "Member of the public".)

**Optional: You may wish to explain briefly what expertise or experience you have that is relevant to the subject-matter of the consultation**

I have self built my own Passivhaus.

Please select the category which best describes your organisation

*No Response*

Please choose one of the following:

I am content for this response to be published and attributed to me or my organisation

Please provide your Full Name or the name of your organisation. (Only give the name of your organisation if you are submitting a response on its behalf).

(Note: the name will not be published if you have asked for the response to be anonymous or "not for publication". Otherwise this is the name that will be published with your response).

Mick Woolley

Please provide details of a way in which we can contact you if there are queries regarding your response. Email is preferred but you can also provide a postal address or phone number.

We will not publish these details.

**Aim and approach - Note: All answers to the questions in this section may be published (unless your response is "not for publication").**

Q1. Which of the following best expresses your view of the proposed Bill? Please note that this question is compulsory.

Fully supportive

**Please explain the reasons for your response.**

PH is already available, tested and proven, over 30 yrs, as an excellent route to deliver high quality, comfortable and low energy housing. It is a recognised and well understood standard, so that getting components or labour from anywhere in the world is possible.

It really is not that difficult: I can confirm that: as a first time PH self-builder I produced the most most airtight house in UK. Don't let developers lie that it is 'hard' - it requires common sense and attention to detail and is then perfectly straightforward.

Q2. Do you think legislation is required, or are there other ways in which the proposed Bill's aims could be achieved more effectively? Please explain the reasons for your response.

Please legislate. This is the quickest route to reduce the high energy bills we see in current new housing. Please try and include provision to stop housing that is already passed from being built out at old regs levels. Large developers often get planning on a big site with hundreds of homes, but then build out at 30 a year (to maximise profits). They should be forced to upgrade their designs once they complete the phase they were in at the point this becomes law. This could save 1000s of houses being built to terrible standards and needing retrofit.

Q3. Which of the following best expresses your view on setting the Passivhaus standard or a Scottish equivalent as the most appropriate new build housing standards to contribute to eradicating fuel poverty?

Fully supportive

**Please explain the reasons for your response.**

Please be very wary of diluting PH. Some self build houses are built to 'PH principles'. This is not the same as ensuring the houses meet PH properly, as it can sometimes be little more than slapping insulation in and fitting triple glazed windows. Doing this, but having gaps in the insulation and thermal bridges and poor sealing around windows and doors will completely negate the point. It happens all too often and I see it whenever I take a walk around new build estates.

I recommend PHPP modelling that verifies the design, and stringent QA during build and signoff, otherwise corners will be cut.

Q4. Which of the following best expresses your view on setting the Passivhaus standard or a Scottish equivalent as the most appropriate new build housing standards to contribute to a reduction in emissions?

Fully supportive

**Please explain the reasons for your response.**

Reducing energy use will reduce emissions. Really, you need to ensure gas is no longer used in any domestic dwellings. In my own (160m<sup>2</sup>) house, my heating and hot water use with ASHP is just 1300kWh/a. This is how it should be.

Q5. Which of the following best expresses your view of the process set out to ensure that the new standards are met in all new build housing? (see pages 14 to 16 in the consultation document)

Partially supportive

**Please explain the reasons for your response, including your views on how effective the process would be in removing the 'performance gap' and on how the proposed verification process might work in practice.**

As noted in my previous responses, I believe inspection and certification are really needed. This is not onerous, it mainly involves ensuring photos are taken during build that confirm the designed details are actually implemented. The independent check at the end confirms this. If anything is missing I would say this should put a house into an 'observation' mode, where in use monitoring confirms the house meets its spec, with penalties for failures. It is simply not right that, as noted in your document, builders hand over houses and then it is the luck of the draw whether they are awful or not. There have been cases where standards are so bad, developers leave out critical insulation - this sort of thing must be stamped on hard.

Q6. What could be the market effects of the introduction of this proposal?

It could be good for small and mid size builders, as they generally are working to better levels of care than large builders. They will also be quicker to get themselves sorted, I believe. Ultimately, any house that meets PH will be far more desirable in future and prices will reflect that. Note that the payback period may only be a few years, and also that building to PH need not be much more costly in practise, because there are all sorts of optimisations that accrue when design is carefully done early on.

## Financial Implications

Q7. Any new law can have a financial impact which would affect individuals, businesses, the public sector, or others. What financial impact do you think this proposal could have if it became law?

some increase in costs

**Please explain the reasons for your answer, including whom you would expect to feel the financial impact of the proposal, and if there are any ways you think the proposal could be delivered more cost-effectively.**

I suspect initially there would be a slight premium, as PH includes triple glazing, MVHR and (potentially) more insulation.

On the other hand, care at design could result in more appropriate glazing dimensions in a PH, such that it will be right-sized for passive gain and daylight, rather than large glazed expenses, I have heard several cases where design updates have reduced people's original glazing aspirations as they moved to PH and gave them an overall cost saving even though they had upgraded to triple glazing. Similarly, the focus on careful design of PH details, and keeping form factors down, with the low thermal bridging inherent in PH can result in insulation required being optimised, again potentially saving on costs.

After the house is built, the difference between a typical house using, say, 8000kWh/a and a PH using 1000kWh/a will quickly see paybacks that make these houses very desirable (and all lowering CO2 as well, of course).

## Equalities

Q8. Any new law can have an impact on different individuals in society, for example as a result of their age, disability, gender re-assignment, marriage and civil partnership status, pregnancy and maternity, race, religion or belief, sex or sexual orientation.

What impact could this proposal have on particular people if it became law? If you do not have a view skip to next question.

Please explain the reasons for your answer and if there are any ways you think the proposal could avoid negative impacts on particular people.

PH will improve housing so that air quality is better, no mould etc, all meaning asthma or others with breathing disorders will find the housing excellent. Floors are also warmer in PH, and draughts excluded, which means older people will find they do not suffer discomfort through heat loss.

I cannot think of negative impacts, but again I note that ensuring PH is implemented (and not just a lookalike) is important.

## Sustainability

Q9. Any new law can impact on work to protect and enhance the environment, achieve a sustainable economy, and create a strong, healthy, and just society for future generations.

Do you think the proposal could impact in any of these areas? If you do not have a view then skip to next question

Please explain the reasons for your answer, including what you think the impact of the proposal could be, and if there are any ways you think the proposal could avoid negative impacts?

PH is neutral as to how buildings are built, it is about the resulting standard not materials. That said, I think you also need to be looking at getting the embodied carbon of new builds reduced. It may be good to provide a guideline section to try and encourage reductions, even before you bring out fuller analysis: timber cladding, tile cladding are better than bricks, reduced cement concrete, timber beams over RSJs etc. Even just having an enforced tickbox as part of the build may ensure designers reduce the use of high carbon components. It is worth also noting that steel also will introduce thermal bridging, so designing this stuff out as the norm will also lead to better low carbon in use.

## General

Q10. Do you have any other additional comments or suggestions on the proposed Bill (which have not already been covered in any of your responses to earlier questions)?

I think you should mandate electric heating, ideally heat pumps.  
PV is good, but it does not provide energy in winter, which is the only time of year a PH needs heating (if at all). So PV is not the first solution to a low carbon home, not needing heating in the first place is.