

# 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".)

Professional with experience in a relevant subject

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**

Environmental architect with 20 years professional experience primarily in the social housing sector striving to meet comfortable and energy efficient homes and subsequently arriving at Passivhaus methodology as a solid foundation to achieve aims.

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).

Rupert Daly

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.**

Passivhaus or Scottish equivalent should be viewed as a starting point for fabric first approach. To facilitate this verifiable quality assurance is a must. However we must rapidly accept this standard and look beyond to include zero emission heating and hot water as well as on-site generation. This is a proportional response to the climate emergency.

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.

Legislation is required. Individuals can strive for excellence but if it's not legislated it's unlikely to happen. From experience with Local Authorities recent efforts to include Passivhaus have been partially successful however they are competing against a tide of resistance to change. If all projects need to meet the standards it's not treated as an aspiration (or hindrance depending on your view) but simply a requirement. Physiologically this is important and collectively we all just get on with the job of designing and building better buildings. If an alternative is to be considered in the interim it must achieve the quality assurance outcomes. There is a component method in passivhaus which can be used for retrofit projects. This has backstop performance values for example walls, floors, roof, windows but still requires the rigorous airtightness and ventilation (MVHR) requirements. This could be an interim measure to facilitate scaling up of verification.

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.**

The current SAP methodology lacks quality assurance and can easily be manipulated. The scope to offset building performance by the use of renewables is an issue as it is essentially facilitating poor build quality.

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.**

The current requirements using SAP are a benchmarking tool and not a design tool such as the Passivhaus Planning Package. As there is no robust checking system in place for the design followed through to construction there is huge scope for performance losses. The options within sap to offset building performance with renewables is a major flaw as it facilitates poor building fabric performance.

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.**

The verification process of Passivhaus is robust but is also a massive undertaking. At the scale of new build in Scotland is there capacity to implement this? Over time Yes, in the short term we need to facilitate a quicker method which achieves results and enable a just transition. A component method option would facilitate this for certain scales of development and facilitate the full standard to be implemented at scale e.g all social housing/multi-residential. Both component and full method should be verified by an unwavering performance standard. Passivhaus exists and is verified and tested. If a Scottish equivalent it should be in partnership with the PHI I.e using the methodology.

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

Implemented across the whole housing sector it will quickly stabilise as the new normal. Implemented to particular sectors e.g social housing, will create an imbalance. A positive outcome of this in the short term is it may influence a greater re-use of existing buildings which may otherwise be demolished in favour of new build which in a climate emergency can only be considered a good thing!

## 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?

no overall change 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.**

Costs will stabilise quickly as the standard becomes the new normal. As it becomes more understood designs will get more efficient in the use of materials and energy. Capitalist economics will compete to drive down costs and supply chains grow. The PV market is an example of this. 10 years ago PV panels were relatively expensive per kWh generation but costs have come way down.

## 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.

Generally positive impacts. The passivhaus standard is a comfort standard as well as an energy standard. If people can live in relative comfort without financial / health concerns for fuel poverty they can live a life with less stress.

## 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?

Passivhaus offers healthy, comfortable and affordable to run homes. We already know that there are a huge number of issues with current new builds which are not fit for our future. In the same way as the oil Industry developed in the North Sea, basing our economy on a climate positive future will bring growth not only at home but also in exports in industry knowledge and innovation. We are a country of innovation and must stop following and start leading .

## 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)?

This bill should not compromise any positive aspects of the building regulation improvements e.g carbon emissions reduction but should instead compliment and support further improvements. Perhaps not greatly understood the Passivhaus standard can greatly reduce the life cycle carbon of a building in both operational and embodied carbon as the standard promotes efficient building forms to achieve ultra low operational heating demand and consequently, Cost optimal efficiency. The current trajectory of focussing on heat pumps to reduce carbon emissions in the short term will delay not resolve the issue. MEP has a huge carbon footprint and will catch up with us at the lifecycle of the equipment (15-20years) not the life cycle of the building (50-100years)