

## **Frequently asked questions - 'Domestic Building Environmental Standards (Scotland) Bill'**

### **What is the bill about?**

This bill will legislate for the introduction of the Passivhaus Standard or a Scottish equivalent for all new build housing only in Scotland from 2025. The bill does not seek to legislate for the retrofitting of existing homes.

### **Why is this bill needed?**

We have a perfect storm - energy prices are soaring with bills for many families more than doubling in just a few years. Fuel poverty in Scotland is at 25% of households. People are choosing between heating and eating. The direction of travel is to move to electric heating sourced from renewable sources but this is a more expensive form of energy and there is insufficient capacity to meet demand. Therefore, we need to use less energy. At the same time we have a climate crisis and Scotland is failing to meet its climate targets. We need to reduce our energy consumption and emissions.

The best way to cut fuel consumption and bills is by not using energy in the first place.

### **What is a Passivhaus?**

A Passivhaus building provides significantly improved comfort and indoor air quality, as well as much lower energy bills. They are built with attention to detail and to rigorous design and construction principles that eradicate draughts retaining heat, lowering energy demand.

### **What are the main features of a Passivhaus home?**

A Passivhaus has the following main features

- A high level of insulation, is draught free, has minimal thermal bridging, optimises passive solar gain, has mechanical ventilation often combined with heat recovery

These features combine to make the building comfortable to live in and very energy efficient.

### **Why do we need this change?**

A combination of issues drives the need for this bill

- Increased energy prices are pushing more households into fuel poverty
- The climate emergency
- Scotland has missed its climate targets - we need action across all sectors to address the climate emergency and housing must play its part.
- There is a need to eliminate the performance gap of up to 60% between what is claimed as the energy performance of a home against the actual performance.
- 25% of Scottish households are in fuel poverty and numbers are expected to rise due to global energy price increases

### **How will adopting Passivhaus standards or a Scottish equivalent help?**

Scotland has the highest level of fuel poverty in the UK. 25% of Scots are living in fuel poverty. Adopting Passivhaus or equivalent standards will reduce the energy demand for heating by up to 90% (compared to existing housing stock), cut fuel bills and reduce emissions. Passivhaus construction makes homes very fuel efficient and reduces the demand for energy. This approach will future proof homes meaning they will not need retrofitting in the very near future.

**The Scottish Government is already consulting on new building standards that will see all new build homes built to energy rating C, does this not mean there is no need to introduce this bill?**

No, the Scottish government's plans rely on expensive electric heating replacing gas fuelled boilers. Electric heating increases demand on the grid and will continue to produce CO2 emissions. A Passivhaus or an equivalent standard is achieved without the use of energy. Passivhaus construction is a verifiable measure based on actual performance as opposed to the current Energy Performance Certificate system which is the theoretical model. Passivhaus construction will eradicate the performance gap. This is the difference between how a new home is expected to perform and how it actually performs in relation to energy efficiency.

**Will building to the Passivhaus or equivalent standard increase the cost of new build homes?**

The estimated additional capital cost of building to the standard is estimated to be between 4%-8% of the total build. However, vastly improved energy efficiency will result in savings on heating bills and reduced emissions. The initial additional outlay will be repaid over time.

Builders report that moving from small or one-off projects to building Passivhaus at scale will see the cost difference narrow. If these homes have to be retrofitted at a future date then the cost of doing so will be far greater than if it is done during initial construction. There is also financial savings for society as there will be lower CO2 emissions. The cost of addressing these issues through improvements to the fabric of a building at the construction stage is much lower than retrofitting to meet higher energy efficiency standards at a future date.

**Do we have the skills to build to the Passivhaus standards or equivalent?**

House builders who have moved from traditional construction methods to Passivhaus standards have invested in upskilling their workforce. They talk very positively about how this has increased the pride architects and tradespeople take in their work and improves skills. Reports from companies in Ireland and Scotland who have taken this approach have been very positive. The changes required are described as tweaks to existing methods and a change of mindset.

**Is there public support for this?**

The Scottish Climate Assembly which is a representative group of the Scottish people voted by 97% to adopt the Passivhaus standard or a Scottish equivalent. This shows there is public support for the approach taken. The Scottish Green Party had this as part of their 2021 manifesto

**Are there any Passivhaus homes in Scotland just now?**

Yes, Housing Associations, house builders and private citizens have built Passivhaus homes across the country and more are planned for Glasgow, Midlothian, Lanarkshire, the Borders, Dumfriesshire, Stirling and Argyll and Bute.

**Who will verify that homes are built to the correct standard?**

A new level of evidence will be required to meet new standards introduced by this bill. Currently an independent certifier signs off compliance and if a home has reached the standard. For non Passivhaus homes local authority building control departments provide the documentation required for the house to be signed off as complete. If this bill is adopted, then a new or amended certification process will have to be considered.