

Pilkington United Kingdom Limited Briefing

Future Homes Standard / Part L 2025 consultation

What is it?

The government recently consulted on its proposals to achieve the Future Homes Standard (for new residential buildings) and Future Buildings Standard (for new non-residential buildings) in England. The consultation set out intended changes to the Building Regulations, notably Part L, the associated Approved Document guidance and calculation methods.

Why is it important?

Its importance cannot be underestimated as it is seen as the last major change to Part L. The government believes these changes will make all new buildings in England 'net zero ready' for when the national grid becomes decarbonised.

What are the main headlines for the fenestration sector?

Somewhat surprisingly, for new residential buildings, no changes have been proposed to the current limiting ('back stop') and notional U-values for walls, roofs, floors and windows. For windows, the proposals are for these to remain at 1.2 and 1.6 W/m²K, respectively. Many in the industry were expecting the former to be improved to 0.8 and manufacturers have been developing and bringing to market low U-value products and solutions.

Note. The notional specification for new dwellings – which includes reference U-values - is used to set the targets for the primary energy, carbon dioxide emissions and fabric energy efficiency rates that a new dwelling must meet.

The proposals include a change to the way in which U values are calculated for windows and doors. In the window and door industry, the current methodology to calculate U-values uses a 'reference' window size and configuration. This allows a comparison to be made between different window and door products, but it means that the U-value is not representative of the actual windows and doors currently being installed in new homes. Supplying U-values of actual windows and doors will complement the proposed new Home Energy Model – replacing the current Standard Assessment Procedure (SAP) – which will rely on accurate product and material performance data to determine the energy performance and carbon emissions of the dwelling.

Why are there are no improvements to the fabric?

Apparently, the justification for this is that fabric improvements are no longer viewed by government as a cost-effective way of reducing operational carbon. The government appears to be putting all its eggs in three baskets: heat pumps, photovoltaics (for one of the two notional dwelling options) and grid decarbonisation. The 'fabric first' approach to energy efficiency seems to have fallen out of favour.

Note. 'Fabric first' combines high levels of insulation with good design to minimise the energy required to heat and cool buildings, whilst taking account of airtightness and ventilation needs.

By ditching the 'fabric first' and 'whole building' approaches to energy efficiency, the Future Homes Standard:

- ignores the recommendations of the Committee on Climate Change (that all new buildings must be zero carbon by 2025 for the UK to meet its legally binding decarbonisation targets)

Pilkington United Kingdom Limited

European Technical Centre, Hall Lane, Lathom, Nr Ormskirk, Lancashire. L40 5UF

enquiries@pilkington.com | www.pilkington.co.uk

- will result in space heating demand much higher than for many dwellings being built today (as high as 52 kWh/m²/year, compared with 15 – 20 for typical low energy or passive houses - according to the Future Homes Hub)
- does not consider homeowners' running costs - one of the two options proposed has energy bills twice as high as a home built to today's standard
- is not 'future-proofed' – homes might need to be retrofitted in future to improve energy efficiency and reduce energy bills, and
- does not consider occupant comfort.

Could the change to the calculation of window U values be significant?

Yes, as currently U values of windows are based on a 'reference' size – based on an opening of 1.23 m wide by 1.48 m high, with a central divider and comprising one opening light and one fixed light - which is larger than most residential windows. Smaller windows (with more frame / less glass) tend to have higher (worse) U values, which might need to be compensated for with more highly-performing elements (e.g. profile, glass, etc.). The industry will also need to develop appropriate software to support this change, particularly to help window fabricators and installers to demonstrate compliance.

We support the proposal that U-values of windows and doors should be calculated based on the actual size and configuration of the windows and doors being used. It will give greater confidence to housebuilders, developers, homeowners and tenants, and contribute towards closing the 'performance gap' between as-designed and as-built constructions.

Is the focus only on new build?

Whilst the main focus of the consultation is on new build, some of the proposals affect existing buildings. For the replacement window market in the residential sector, though, window U values and Window Energy Ratings are expected to remain at the current levels of 1.4 W/m²K and band B, respectively. In terms of non-residential buildings, no major changes have been proposed for the fabric.

Are there any proposals other than energy efficiency that could have an impact on glass?

Yes. As part of the same consultation there is also a call for evidence on Part O. In force since 15th June 2022, Part O of the Building Regulations and the supporting Approved Document set requirements for new residential buildings to be designed to limit unwanted solar gains in summer and provide an adequate means to remove excess heat from inside.

The call for evidence is seeking views on how well Part O is working in practice and which elements would benefit from further research and analysis. It is also asking for comments on extending the scope to cover material change of use, for example converting a non-residential building to a residential building. Data has been requested on how extensions and conservatories can impact on the overheating risk in existing dwellings – which could be significant for the glass and glazing sector.

Based on our own Part O survey - in which 71% of architects agree that there's a missed opportunity to combat overheating by limiting the strictest measures in the simplified method only

to London and central Manchester – we believe that the current approaches to demonstrating compliance need to be reviewed.

Is embodied carbon within the scope of the consultation?

No. The government has confirmed that embodied carbon is outside the scope of the Future Homes and Buildings Standards and existing building regulations. However, it has indicated its intention to consult on measuring and reducing embodied carbon in new buildings in the future, possibly before the end of this year.

Despite the lack of regulation, whole life carbon assessments of buildings – taking into account both embodied and operational carbon – are becoming more common and it does feel like a matter of when, not if. An example of how building regulations might address whole life carbon appeared a few years ago when parts of the construction industry produced a 'mock up' of an Approved Document Z.

What about other nations in the UK?

The Scottish Government intends to make legislation by December 2024 to deliver a Scottish equivalent to the Passivhaus standard. Applying to both new homes and new non-domestic buildings, the requirements are expected to be less prescriptive and more flexible than the traditional Passivhaus standard, but increasing the demand for products with lower U values. A consultation on the proposals for Scotland are anticipated in the first half of 2024.

We understand that working groups have been initiated to help develop proposals for changes to Part L in Wales, ahead of a public consultation later this year.

When will the proposals be implemented?

The consultation is seeking views on transition periods, but it is anticipated that the new requirements will be published before the end of this year for enforcement before the end of 2025. These timelines could change, though, dependent upon the feedback from the consultation.

When did the consultation close?

It closed on 27th March 2024, extended from the original deadline of 6th March. Pilkington United Kingdom Limited, part of the NSG Group, submitted its own response and supporting evidence before the deadline. We also contributed comments to the responses of several other trade associations in the glass and glazing sector.