

The next challenge

Edgetech managing director Chris Alderson analyses the fast-approaching Future Homes Standard, and what it could mean for British glass and glazing



Chris Alderson

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UK glazing has done a fantastic job of adapting to one of the most turbulent periods in living memory for the industry. It has overcome the chaos of the pandemic, a deepening skills shortage, and the worst supply chain disruption in a generation.

However, now it faces another major challenge: the Future Homes Standard.

The Future Homes Standard, which comes into force in 2025, will potentially have significant implications for every part of the glazing supply chain.

Currently, we don't know exactly what its impact will be – only that it's likely to radically change the way the sector operates. UK glazing can meet these challenges, and I have every faith it will. For that to happen though, we need to be acting now.

Whilst we are unsure as to what the new regulations will stipulate exactly, it is extremely likely they will include strict new energy efficiency targets for new build. There has even been speculation that they could require U-values as low as 0.8 (bordering on Passivhaus standard).

Even if the final requirements aren't quite that stringent, it's clear another leap forward in window energy performance will soon be required. In UK glazing, there is an emerging consensus that triple glazing provides the most practical route to achieve the progress necessary for greater energy efficiency.

Some manufacturers are understandably concerned – a significant investment in processes and machinery will be needed to make triple glazing the norm. However, a lack of investment in triple glazing carries a substantial risk for the industry.

Without the necessary investments to improve availability of triple glazing, architects and designers could be forced to adapt in other ways to meet tougher energy efficiency regulations. Without an efficient enough window offering, options such as designing structures with much smaller windows, or far fewer windows overall, are already being evaluated as alternate routes for compliance.

This would significantly cut demand for glass across the lucrative new build sector, and the impact on the entire glass and glazing industry is clear.

It would also be detrimental for homeowners too. Numerous studies have shown the physical and psychological benefits of natural light. In this scenario, these benefits would be reduced, and the built environment would become a gloomier, less inviting place to be.

Both for our sector, and the benefit of society more generally, it is vital that UK glazing seizes the opportunity to make triple glazing a viable option now. □

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The cycle of recycling

Simon Drury, the sustainability manager at Eurocell, describes how its recycling process works and explains how the industry can benefit from this

Eurocell Recycle enables Eurocell to transform old PVC-U window and door frame waste into new PVC-U extrusions that can be manufactured into sustainable products.

The principle is known as a ‘close-loop’ model – or cradle to cradle.

We have the largest PVC-U recycling system in the UK, 16.8k tonnes of recycled material goes through our centres every year, equivalent to 3m windows. It is imperative that we are committed to recycling every piece of waste so that the environmental impact of our products is as minimal as possible.

That’s why we have invested more than £10m into our recycling plants and nationwide service, which includes two purpose-built centres that handle all of our recycling, creating one of the most innovative and advanced recycling systems in the UK.

Our recycling process

Our closed loop system is a nine-step process that results in new profiles being manufactured from old PVC-U.

To start, waste is collected and there are three primary sources for this – post-consumer waste, fabricator cut-offs and bar length. Once at our plant it is shredded into processable pieces. Next, it goes through separation which uses a magnetic process to separate metals from the rest of the waste. This is recycled separately from the plastic.

This remaining waste is granulated into uniform size before it is washed, which involves a series of water tanks to ensure that contaminants are ‘floated’ out.

In the loop

The sixth stage is colour sorting. This is an advanced process which also filters out any rubber granules to leave only clean, colour sorted PVC-U. To create new products, pelletisation turns the granules into finished material that is ready for extrusion. A proportion of the recycled material is then used onsite, whilst the rest is transported to our extrusion facility.

Even better

It is interesting to note that the final newly formed product is often made to a higher specification than profiles made from virgin material

Our operation has rigorous targets to help lower our carbon footprint year on year. In 2022, this resulted in 47 kilotons of CO2 saved and 82% of our PVC-U recycled.

Up to 70,000 old windows are processed per week and turned into new products, which means almost 100% of our production waste is reused.

The quality control system to eliminate other materials means there is a less than 1% return-to-site ratio.

Fabricators can greatly benefit from recycling for a variety of reasons.

The convenience of having a partner that does regular collections creates financial gain from disposing of old windows which would otherwise be taken to landfill sites or kept in skips or waste storage.

Another benefit of recycling is the peace of mind that this is done responsibly and complies with Environment Agency regulations. We provide traceable reports of our recycling and information is also released online.

Despite worries about the quality of these products, PVC-U is robust enough to be recycled and repurposed up to 10 times without the quality or performance deteriorating.

Take action

Eurocell Recycle is a huge part of our business and allows us to be at the forefront of recycling in the industry. The closed loop system keeps waste to a minimum. There is often a lack of understanding by businesses and also poor communication with customers on the benefits of recycling PVC-U.

Advances in manufacturing mean that recycled PVC-U isn’t an issue, and we encourage the industry to use this as much as possible. Government targets will only become stricter so it is important to take action on recycling now.



Simon Drury

Keep in the heat

The Future Homes Standard compliance becomes mandatory in less than 18 months. Yet despite this change to regulations, two-thirds of housing market decision makers remain unprepared. Kevin O'Neill, commercial sales manager at Rehau UK, looks at the role fabricators can play to help the supply chain implement more thermally-efficient windows

The purpose of the Future Homes Standard (FHS) is simple – to make new and existing homes more energy-efficient in line with the UK's net zero ambitions. Since its introduction in 2022, the FHS's impact is already being felt across the housebuilding supply chain.

Given the role of windows in a structure's thermal performance, and the standard mandating uplifts to part L of the building regulations, fenestration professionals are highly affected by these updates. Fabricators are therefore in an interesting position ahead of 2025, when the latest standards will be enforced. Sitting between developers and installers, and responsible for manufacturing frames that can achieve U-values of 0.85 W/m²K in line with the 2025 uplift, they have a key part to play in ensuring compliant homes.

As the current regulations mandate windows with U-values between 1.1 and 1.4 W/m²K, the scale of the task is clear. This is also to say nothing of making existing homes more efficient, especially with the UK Green Building Council forecasting that 80% of today's buildings will still be in use in 2050.

With such upheaval expected extremely soon, it would be fair to assume that the housebuilding market and its supply chains are on track to develop and refurbish homes in line with the FHS. However, recent research has demonstrated this is not the case, opening up an opportunity for fabricators.

Discovering disconnects

Specifically, the latest market readiness report from polymer profile manufacturer Rehau has revealed clear barriers to progress. The report, titled *Future Homes Standard: Preparing UK Housing for 2025*, surveyed 200 building product decision makers on how prepared they were for the impending FHS uplifts. Worryingly, 79% said it was going to be 'somewhat challenging' or 'very challenging' to meet the current timeline, and no respondents were aware of window systems meeting the mandatory 0.85 W/m²K U-value.

Considering suppliers already offer products achieving this level of performance, this awareness gap is concerning. It points to a disconnect between the FHS legislation and its implementation that fabricators can play a role in addressing. Specifically, by working closely with material suppliers such as Rehau, these organisations can ensure compliant frames are available, and help bridge knowledge gaps housebuilders and installers may have.

As these performance standards are mandatory, knowledge of regulatory changes and products that meet required levels will be key to avoiding project delays and costs caused by incorrect specification.



Kevin O'Neill

Supplier support

Currently, the housebuilding industry regards the standard's uplifts as an obstacle the sector is not ready for. It will only be overcome with added expense and as-yet undeveloped window solutions. However, this is not the case – suppliers including Rehau already offer FHS-compliant profiles.

As a valuable link in the housebuilding chain, fabricators are well-placed to highlight this, affect change and assure that 2025's updates can be taken in stride. No new materials or practices will be required – just good practice and existing high-performance fenestration components. □

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