

A House Without Bills



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Illbruck's i3 sealing system contributed to a major energy-efficient renovation on Channel 4's House Without Bills television programme.

Hosted by Guy Martin, the programme documented an ambitious renovation of a 1930's semi-detached property.

i3 was selected as a critical component, demonstrating its capability to deliver airtightness and weather protection in high-performance retrofit scenarios – to Passivhaus standard.

Whole envelope

Retrofitting existing housing stock presents unique challenges compared to new builds. Older properties often suffer from significant thermal bridging, poor insulation and high levels of air permeability. Addressing these issues requires not just improved windows or heating systems but a holistic approach to the building envelope.

The project required a sealing

solution that could guarantee long-term performance, prevent condensation and ensure the airtightness level necessary for Passivhaus were met.

The solution

The selection of the illbruck i3 sealing system underscores its status as a leading solution for window and door sealing. Unlike traditional methods that may rely on a single line of sealant, the i3 system utilises a three-layer principle. This approach ensures that the joint is sealed effectively against the weather while remaining permeable to water vapour, preventing the accumulation of interstitial condensation.

The three-layer principle

i3 separates the sealing function into three distinct zones, to the 'inside tighter than out' principle.

An external seal provides weather tightness and protection

against driving rain, while allowing moisture vapour to escape from within the joint.

An intermediate seal provides thermal and acoustic insulation, ensuring the joint does not become a weak point in the building's thermal envelope.

Meanwhile, an internal Seal provides airtightness and vapour separation, preventing warm, moisture-laden air from the interior entering the joint and causing condensation.

Fabric first

For homeowners, architects, specifiers and installers, this project offers a blueprint for the future of sustainable housing. It highlights that the path to lower energy bills and reduced carbon emissions begins with the fabric of the building itself. Tremco CPG UK remains committed to supporting this transition through the continued innovation and supply of sealing and bonding solutions. 