





GOING GREEN

While legislation around the use of low embodied carbon materials in building projects is yet to be realised, it can't be long before it is, such is the increasing focus on eco-friendly solutions for construction projects.

In the meantime, projects can be rewarded with credits on BREEAM and LEED schemes for embodied carbon reductions which goes some way to helping developers and their architects and contractors adopt sustainable practices to counter growing concerns about climate change, resource depletion and environmental degradation.



Green building materials help reduce the negative environmental impact of developments and contribute to healthier, more energy-efficient, and cost-effective spaces for occupants.

One way to make a property more sustainable is to use roof windows for the addition of a new room or extension. A well-made and installed roof window will let in more natural light compared to dormer windows, leading to less reliance on electricity and lower energy bills.

And ventilating a property naturally, with fresh air through an open roof window, is not only free and green (compared to air conditioning) but also healthier in a post-pandemic world.

A better-insulated roof window will lead to reduced heat loss through the unit during winter months and less heat transmitted inside during summertime. Triple-glazed roof windows have even more impressive U-values (of both glazing and window), leading to a lower level of environmental pollution. Triple-pane construction, where three coated panes are filled with gas (which is more insulating than air), coupled with low-emission coatings which reflect heat back into the room, can have a huge effect on improving heating efficiency and lowering energy bills.



The most eco-friendly roof window on the market today is a triple-glazed and krypton-filled glazing unit with low e-coatings which ensure outstanding heat-insulating performance, and an Uw parameter of 0.99 W/m²K. Krypton gas-filled pane construction conducts heat by 46% less than the most frequently used alternative Argon.

These technology and manufacturing methods ensure minimal heat loss, helping the environment and leading to lower energy bills, but they also provide improved noise reduction on both traffic noise and impact noise such as rain – another great selling point.



Expert advice

Dakea's technical sales manager for GB, Ireland, Netherland and Belgium, Andrew Birch, advises: "Always use a foam collar which creates an insulation barrier around the roof window frame which prevents heat loss which means less heating is needed in the cold season. Roof windows with better U-values such as triple-pane windows are around 15% more energy efficient than double-pane roof windows."

Once a sustainable roof window is selected, the next focus should be on its sustainable installation. The greenest installation is one that's done quickly and efficiently, ensuring journeys to and from the property are minimised and the roof windows are properly installed. Heat can escape through the smallest of window gaps, so a window that is installed as well as it is manufactured is vital when considering sustainability. A well-installed window will also survive hot summers

and wet weather better and give improved service to the occupants and developers for longer, making replacement less frequent.

And while the life span of a roof window can be up to 40 years, for the most eco-friendly windows, manufacturers will recommend upgrading after 15 to 20 years to ensure their effectiveness is optimised. Once they are upgraded, the old windows and aluminium flashings can be recycled at waste collection points.

Detailed instructional videos which show how to install different styles of roof windows and flashings are available on the <u>Dakea website</u>.

Dakea's sustainability strategy focuses on reducing, and then totally eliminating, its operational carbon emissions within the next eight years.

The company's production facilities are certified to ISO 14001 Environmental Management System standards which means that everything the company manufactures follows strict environmental performance requirements. In addition, the factory recycles its wood waste, using it for central heating and heating domestic hot water. And 96% of the wood used comes from sustainable and FSC-certified forests, meaning each tree cut down will be replaced by a sapling. The remainder of the wood comes from controlled sources. The wood is long-lasting Nordic pine which is valued for its excellent wood density and resistance to weather conditions.

All Dakea products are packaged in recyclable cardboard boxes and all materials of secondary packaging, like small plastic bags (for screws), are also recyclable to minimise the impact on the environment. Installers reassure customers they'll dispose of the packaging, or if it's a larger project, use an appropriate recycling skip on site.

KEY TAKE OUTS

- Roof windows let in more natural light compared to dormer windows, leading to less reliance on electricity and lower energy bills.
- Roof windows with better U-values such as triple-pane windows are around 15% more energy efficient than double-pane roof windows.
- Proper installation is as important as the manufacture of a roof window.
- Dakea's sustainability strategy focuses on reducing, and then totally eliminating, its operational carbon emissions within the next eight years.

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