

TEDDINGTON HOUSE

Marrying solar panels with natural toplighting and ventilation in the home.

This was the brief to Simon Merrony Architects when approached by the owners of this London-based family home; an objective they were ready to embrace as society strives for a carbon free future.

Naturally, to ensure the adequate retention of solar energy, the photovoltaic (PV) panels demanded the vast majority of the roof space, so the opportunity for architectural expertise came in achieving the perfect balance between interior comfort, exterior aesthetics and functional, watertight integration.

Simon Merrony's focus was all on the details. It was essential the junctions between PV panel and rooflight profile were discreet and uniform, ensuring each component had sufficient room for their functional operation whilst simultaneously achieving the smallest shadow gap possible between the two. In essence, the rooflight's role was to become a faux solar panel in amongst the pack, directing natural light into the living space beneath, with the surrounding panels absorbing, converting and storing the light as energy for the home.

To achieve this level of intricacy, Simon brought together The Rooflight Co and the PV panel providers, Greencap, to collaborate on the design solution.

Together, the right expertise were around the table to leave no stone unturned, quickly resolve every aspect of the design and ensure a seamless integration between the slate roof, PV panels and the pitched rooflight solution – the Neo Rooflight.



Simon liked the Neo Rooflight for its contemporary appearance, and specifying a bespoke version meant the rooflight could be built to the exact measurements of the solar panels, creating the desired uniform look on the roof. The thin external framing and edge to edge glazing the Neo is known for, mirrored the frame design of the solar panels; and this theme continues internally with the seamless Lining to Glass® internal finish.

To ensure the overall sleek and uninterrupted integration between the solar panels and the rooflight, the architect opted for black framing over the standard Neo Umbra Grey, which Simon commented was to 'ensure that the obliqueness of the roof plan is maintained'. Greencap ordered specific coloured edging for the PV panels, colour matching the bracketry and associated fittings for a seamless integration with the rooflight.

The experienced design engineers at The Rooflight Co were on hand to support Simon Merrony Architects achieve their vision. Consulting on the development of project specific installation details, our technical design team tested the bespoke opening mechanism to ensure adequate ventilation to the room below. Our team went further, undertaking prototyping in our Cotswold based workshops, to confirm we were able to achieve a recessed modular design concept that was practical, waterproof and aesthetically pleasing.

This project was a prime example of how architects and installers can work in unison with The Rooflight Co to develop site specific solutions. As a result, homeowners can merge their personal sustainable goals with well-lit and well-ventilated living spaces.

Achieving a whole unit U-value of 1.4W/m²k, with a light transmittance of 71% and a G-Value of 0.53, this range within the pitched roof collection has been carefully designed to meet all relevant building regulations and set to the optimum configuration for residential buildings in the United Kingdom.



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The Neo range of rooflights combines the highest modern performance standards with a frameless, minimalist appearance both inside and out. Our experienced technical design team are dedicated to supporting architects and contractors turn ambitious visions into feasible engineered solutions.

With the emergence of alternative methods to capture solar energy, The Rooflight Co continue to ensure our product collections can be installed into a variety of roof build ups whilst remaining watertight against the elements.

Architect:

[Simon Merrony Architects](#)

PV Agent:

[Greencap](#)

Contact us for more information:

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Alternatively, visit our website: www.therooflightco.com

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