

CASE STUDY

Flat roof on a new modernist house in West Sussex



Front elevation of the property showing the minimalist requirement for the flat roof application

Project: Private Dwelling
 Address: West Sussex
 Product: Armourplan P polyester reinforced PVC
 Client: Private Client Clinton Dall
 Designer: [DHA Design + Architecture](#)
 Roofing Contractor: [AJ Lucas Roofing Contractors Ltd](#)
 Completion: Summer 2015

The first project to kick off the 2015 season of Grand Designs was an enormous modern house inspired by [Ludwig Mies van der Rohe's German Pavilion in Barcelona](#). The pavilion, an icon of modernist architecture, has inspired many a home; not least the Grade II listed [Capel Manor House in Kent](#) by Michael Manser. This house adds to this oeuvre on a massive scale, reflecting the footprint in two connected pavilion buildings spanning 60 metres, with a swimming pool in place of the reflective pool. It has also earned the title of the biggest house ever to feature on Grand Designs.

With single storey modernist buildings of this type the largest surface is the one that is not seen – the flat roof. In the case of Pavello the roof is a full 600m² of Armourplan P with a bespoke fabricated edge detail installed by DATAC approved A J Lucas Roofing Contractors Ltd.

So what can we learn about flat roofs on modernist houses? We spoke to MD Anthony Lucas about the project.

This was a labour of love for the owner, Clinton Dall, who spent over £1m on the project. This was the second home Dall had built with his designer Des Harvey and with A J Lucas installing a flat roof, so the team was well established.

A J Lucas installed the Armourplan P polyester reinforced PVC single ply membrane over 150mm of



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mechanically fixed insulation on what is a very lightweight structure to keep the roof profile shallow. As Armourplan is available in RAL colours, Dall was able to choose a colour that matched his choice of light driveway blockwork, so that if seen from above the roof and hard landscaping would form a harmonious whole. In spite it being such an enormous element, the roof is completely invisible to the visitor, save its edge, and the edge is what makes it so successful. The walls are clad in pristine white porcelain tiles, and Dall wanted the wall of the lower pavilion to stop at roof level with no perceptible edging.

The invisible edge was achieved with a powder coated bespoke fabricated aluminium edging detail which A J Lucas custom-made for the project. The edging produces an extremely thin edge the colour of the porcelain tiles, effectively allowing the roof finish to disappear without a parapet.

Advice to architects of modernist houses

So what advice would Anthony Lucas give to architects wishing to achieve a similar flawless finish on their modernist dream?

Firstly, make sure you use a roofing contractor who is experienced in installing single ply membranes. A J Lucas install tens of thousands of metres of single ply all over the UK every year, so their installers are not only experienced, they are used to producing a good finish. Like all DATAC contractors, A J Lucas installers are trained by SIG Design and Technology in roofing installation at our training academy in Shepshed. Secondly, use a product with a good pedigree.

Armourplan is an extremely popular single ply roofing membrane. Lucas confirms that it is very flexible and easy to use, and ideal for lightweight roof structures. It is cost effective, made in the UK and has been on the market for over 30 years.

Armourplan is used in massive volumes on a wide range of projects every year; a product with this kind of history, well detailed and well installed, will produce a quality finish and reliable waterproofing.



IKO Armourplan P PVC Single Ply Membrane flat roof application illustrating the clean uncluttered finish.

Finally, Anthony urges you to talk to the specialists.

Whether your installer, like A J Lucas, is experienced in fabricating bespoke edge trim, or if you call on the expertise of impartial designers such as SIG Design and Technology, describe your requirements to them so that the finish will be as you expect. Lucas describes working with SIG Design and Technology as a big family. "We all work together, there's nothing that's too hard to sort out."

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"My word, it looks faultless" – Kevin McCloud reacts to the pristine finish of this house during the reveal for the show. Watch the video here:

<http://bit.ly/granddesignsarmourplan1>

More information

- A J Lucas Roofing Contractors Ltd is a long-standing member of our DATAC approved contractor scheme. Find out how DATAC benefits architects here: <http://bit.ly/granddesignsarmourplan2>
- Visit the Armourplan P Product pages and downloads, including the Armourplan Brochure, data sheet and BIM: <http://bit.ly/granddesignsarmourplan3>
- Learn more about the 8 steps to the #PerfectRoof: <http://bit.ly/granddesignsarmourplan4>

