

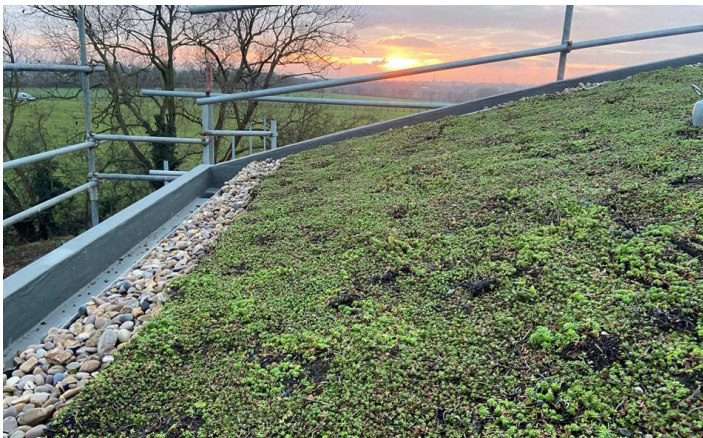
Case Study

The Old Pump Works



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WestWood's PMMA-based resin provided a flexible and robust waterproofing layer for curved green roofs topping luxury apartment blocks.



An exclusive development

Specialist Roofing Contractor: Emperor Roofing Ltd

Project size: 1,000 sq. m

WestWood products: Weplus SA VB, 130mm Tissue Faced PIR Insulation, Weplus SA Preparation layer, Wecryl 176 Primer, Wecryl 230, Wecryl 230 Thix, Wecryl 488 Finish.

The Old Pump Works is a new-build residential scheme comprising an impressive collection of two- three- and four-bedroom homes in a gated complex in Brentwood, Essex.

Forming part of the development are two-storey apartment blocks each designed with curved green roofs to complement the rural landscape. To ensure **a robust, homogenous waterproofing solution** for the green roofs, WestWood's Wecryl 230 PMMA-based resin was specified by Emperor Roofing Ltd.



Long-term protection and durability

FLL certified, the Wecryl 230 PMMA technology is resistant to roots and rhizomes. Providing a flexible, seamless and durable membrane, the waterproofing layer accommodates post-build settlement and withstands the load bearing of the plants.

To the plywood substrate, the roofing contractor applied a vapour control barrier, 130mm of PIR insulation and carrier membrane followed by the fleece-reinforced Wecryl 230 waterproofing resin.

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To complete the roof structure, a specialist green roof contractor was appointed to install a drainage board and filter layer followed by a scientifically-engineered growing medium for the sedum blanket. A border of river washed cobbles added a fire break in line with Green Roof Organisation (GRO) best practice, and an aluminium trim provided a barrier between the sedum and cobbles.

To help maintain the green roofs, an irrigation system was fitted by Emperor Roofing. Timers adjust the amount of water the plants receive based on different seasons throughout the year.

On either side of each apartment block are large flat roofs offering amenity space for residents. Wecryl 230 was also selected to waterproof these areas ensuring a robust solution.

Easing installation challenges



As the project was carried out during the winter, low temperatures and icy conditions created a challenging environment for the roofing contractor. The curved green roof design also made access difficult, requiring all the materials to be craned onto the structure.

The rapid curing qualities of the Wecryl 230 waterproofing enabled Emperor Roofing to respond effectively to the adverse weather. The liquid membrane can cure in as little as 15 - 20 minutes even at sub-zero temperatures. By adding variable amounts of catalyst to the resin, the installation team could control curing times to suit their requirements.



Built to last



The mix of sedum brings colour all year round while offering a low maintenance living roof solution for the luxury apartments. WestWood's PMMA waterproofing was a vital component in the warm roof build-up, ensuring the **green roofs remain watertight for at least 20 years** and the **risk of damage is eliminated** even as plants mature.

