

**PAULTONS FAMILY THEME PARK, HAMPSHIRE**  
**EUROCLAD LIMITED**



The new entrance building to Paultons Family Theme park in Romsey, Hampshire, the home of Peppa Pig World, features one of the most visually impressive waveform roof constructions of any leisure building that Euroclad has supplied in recent memory.

The building, which includes a cafeteria and a retail area, is covered by 3000 square metres of attractive and high performing Euroseam standing seam aluminium roofing. This has been manufactured by Euroclad and supplied in 1.2mm gauge with an ARS protective coating in RAL 9002.

Standing seam roof systems have been available for over 30 years old and involve the 'zipping up' of a rolled side lap over supporting halter. The sheet side laps are closed using a mechanical seaming tool to roll form the 'fixed seam overlap radius', creating attachment to the halter but still allowing free movement under thermal expansion. The standing seam outer sheet can be produced in various metals and finishes with aluminium being the most cost effective. Euroclad standing seam roof systems can be supplied with a system guarantee up to 25 years when installed as an Elite PLUS System.

The entire roof construction is an Elite 4.12, which consists of a liner sheet fixed to purlins and a Quattro spacer system consisting of a bar and bracket that create the gap for the thermal insulation. A stainless steel halter fits to the Quattro bar and over this halter the sheet is mechanically fixed.



There were a number of challenges that made this project stand out; the performance of the roof being paramount. The U-value required on the roof was  $0.12 \text{ W/m}^2\text{K}$ , an extremely high level of thermal insulation, which resulted in 420mm of mineral wool insulation.

The construction was thermally modelled on software compliant to BS EN 10211/1 and 2, fully taking into account any thermal bridging through the system to achieve the required U-value. The roof is also inherently quiet with at least 43db of sound reduction.

There were 24 sun pipes to provide natural light to the interior valley area, barrel vault rooflights at the ridges and 17 wind catchers for the automatic ventilation system. Solar panels were also fitted to the roof.

Both the customer and the main contractor are extremely pleased with the completed building. Keith Ashley, of main contractor Knightwood Developments, said of the project: "May I take this opportunity to say that we were extremely pleased with the roof installation at Paultons Park. The products were manufactured and installed to a great standard and the supply chain worked together efficiently, particularly the Euroclad onsite rolling team and Curtis Engineering's specialist installers. The internal and external finish of the installation looks great; matched only by the exceptionally high thermal performance of the roof system."

Glued laminated timber (Glulam) beams were used to support the roof structure, delivering the structural performance required whilst providing an attractive finish from both the inside and outside of the building.

The standing seam roof provides a multitude of benefits to the new buildings at Paultons Park including:

- Low risk of water penetration with no external penetrations of the outer sheet required and no end laps.
- Lightweight roof systems, making standing seam ideal for steel frame new builds and for refurbishment.
- The finished roof system is low maintenance.
- Complex shapes can be formed, in this case waveform curves
- Roof penetrations such as rooflights, sun pipes and wind catchers can be incorporated without compromise to the roof system.



Attention to detail was a key part of this installation and to ensure clean lines and an attractive ceiling finish a support grid was designed and installed inside the building which served to sit underneath the roof system liner sheets and support an additional layer of liner that was fixed in a far more attractive way than a standard liner would appear.

Because of the metal on metal zipped up side-lap detail, the Euroseam outer sheets effectively breathe, therefore removing the need for a breather membrane or building paper. The roof at Paulton's Park (an over-purlin twin skin liner construction), provides great aesthetics; is versatile and cost effective and the liner can be used as a vapour control. All Euroclad standing seam systems have passed rigorous testing and quality inspection to achieve BBA approval.

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