

Kemper System Provides Solution for Chester Zoo's Monsoon Rain Forest

Chester Zoo, Cheshire



Waterproofing specialist, Kemper System, has provided the roofing solution for a hot and humid environment in the heart of leafy Cheshire at Chester Zoo's £40m 'Islands' development.

The company's solvent-free Kemperol 2K-PUR cold liquid-applied waterproofing membrane has been used for the roof of the 'Tree House', which will form a covered walkway for visitors under a giant polymer dome – called Monsoon Forest.

Designed by Dan Pearlman, the exhibit forms part of the largest zoo development in UK history, Islands, comprising six South East Asian island environments which visitors can explore on foot or by boat to discover native plants and wildlife from the region.

Within Islands is Monsoon Forest which will be home to numerous species including Sulawesi macaques and orangutans, and the tree house – which mimics a field research centre - will enable visitors to walk through the enclosure along a raised walkway.

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Roofing contractor, K. Pendlebury Roofing, met with the client at the zoo to discuss specification for the job, which had to take into account the habitat's changing climate, the water mist that is used to create humidity and, the behaviour of the animals.

Explains Neilan Symondson from K. Pendlebury Roofing: "There is adjacent netting along the side of the tree house roof and the orangutans can move freely within their enclosure, which means that they could throw things onto the roof, pick at the surface with their fingers or even urinate on it.

"Kemperol 2K-PUR provided a robust, flexible solution that will not crack or soften at high temperatures and will provide excellent resistance to humidity, puncturing and uric acid; and roughly 80% of the resins in the Kemperol 2K-PUR are obtained from the seeds of the tropical castor plant which is a renewable resource."

The walkway with its shaped surfaces and the high temperatures proved challenging whilst working on the project. K. Pendlebury Roofing taped the seams of the 200m² plywood surface to prevent any resin from seeping through the joints during the application process.

Following application of a primer mixed with quartz sand to provide a key, the cold-liquid Kemperol 2K-PUR resin was then applied directly onto the roof. The installation team then laid Kemper System's 165gsm flexible reinforcement fleece, which is cut to size and shape on site, directly into the wet resin, using rollers to remove any creases or air bubbles before immediately applying more resin to fully saturate the fleece. The system was applied in a single wet-on-wet process and allowed to cure, providing a seamless, monolithic membrane that bonds directly to the substrate, which is permanently elastic and cannot delaminate.

"Kemperol 2K-PUR is an environmentally responsible waterproofing solution that helps us deliver that remit while ensuring a safe and durable environment for both visitors and the orangutans."

