

Kemper System Enables Barnsley Town Hall to Keep Heritage Intact

Barnsley, South Yorkshire



With its Portland Stone façade and its classical architecture, Barnsley Town Hall is one of South Yorkshire's most distinctive landmarks and best loved buildings.

When Barnsley Council commissioned a project to refurbish the roof as part of a programme of improvements to the building, Kemper System not only had to ensure that the roof was upgraded successfully without any disruption to council services but also had to complete the scheme without any impact on the rest of the building.

Explains Victoria Ramwell, of Kemper System: "The project involved installation of a new warm roof system to enhance the thermal performance of the building as well as providing a new waterproofing surface.

"The town hall remained occupied throughout the programme and the building not only involved challenges in terms of the roof build up and complexity but also has delicate features that we had to protect during the works, affecting the way in which the programme was designed."



To address these challenges, the Stratex warm roof system with Kemperol 2K-PUR liquid waterproofing membrane was specified by Kemper System for the 1,800m² roof. Kemperol 2K-PUR is solvent-free and odourless; ideal for use on occupied buildings where the odours from solvent based or so called low-odour products can be disruptive. Kemperol is also cold applied and therefore can be installed without hot works or the fire risk associated with them.

The existing roof build up consisted of asphalt, followed by a screed and a further layer of asphalt. Barnsley Council were keen to reduce the weight on the roof and so the top two layers had to be removed before installing the new roof.

The remaining asphalt surface varied in condition and a new vapour control layer had to be installed over large areas of the roof surface before installation of Kemper System's Kempertherm insulation board. A tapered insulation scheme was chosen to aid with rainwater drainage.

Stuart Hicks, marketing manager from Kemper System explains: "The Stratex system is designed to enable the installer to choose between mechanical or adhesive fixings for the insulation and initially the contractor planned to use mechanical fixings.

"However, it was clear when the installation team started to drill pilot holes that the vibration could cause damage to the internal décor and potentially the ornamental glass dome inside the building. As a result, adhesive was used to fix the insulation."

As the level of the new insulation was above the lower edge of the glass on the large lantern rooflight, and so as not to interfere with the structure, a drainage channel was created around the roof light and lined with the Kemperol 2K-PUR membrane.

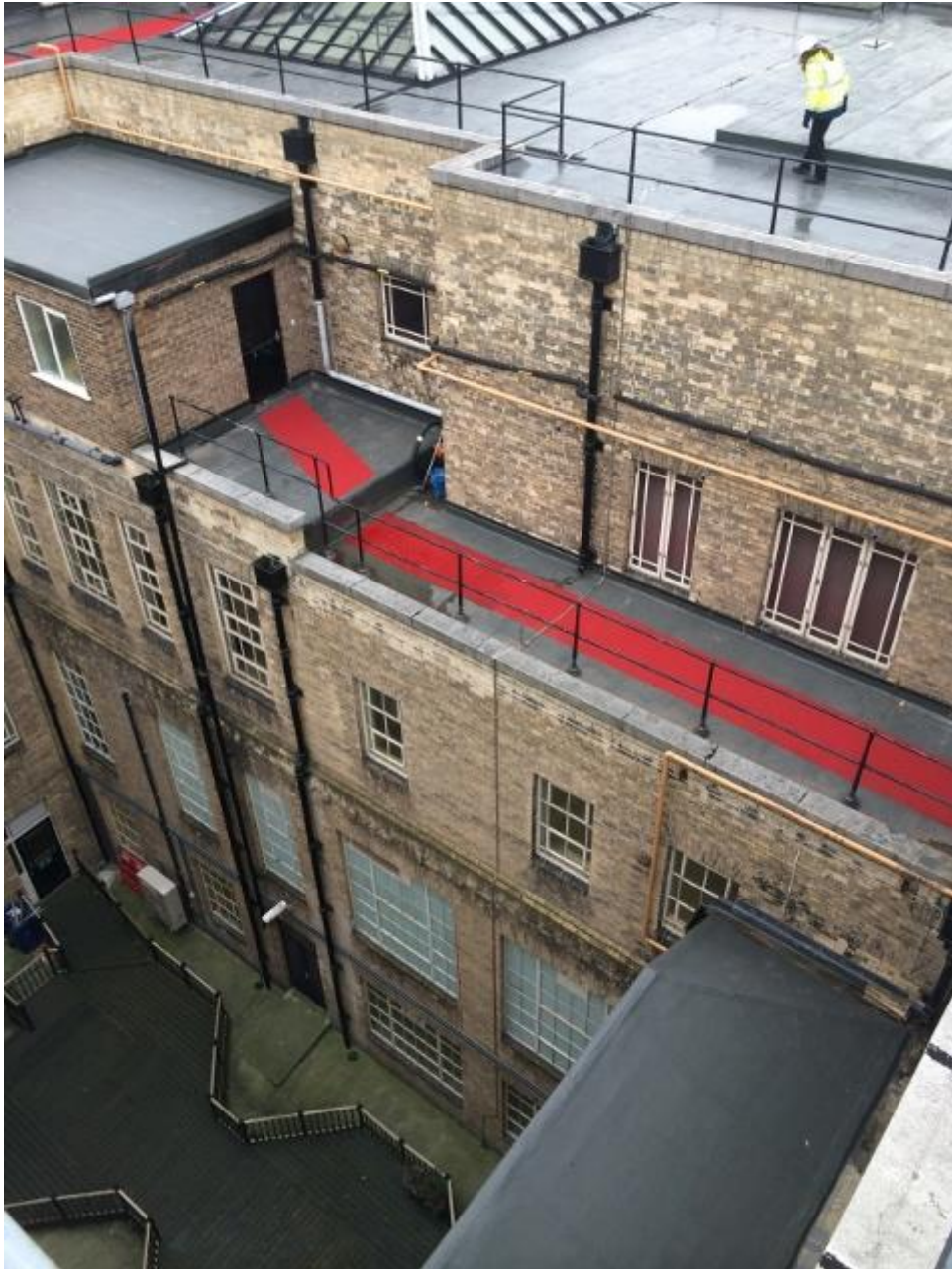
Stuart continues: "The complexity of the roof meant that it would have been extremely difficult to install a new waterproof surface with anything other than a liquid membrane.

"In addition to the roof light, above the internal glass ceiling dome, and the channel we had created around it, we had to contend with a high parapet wall and the outlets that come out of it, numerous skylights, a central plinth and two plant rooms on the roof."



The Kemperol 2K-PUR liquid system enabled the contractor to install the waterproofing to the exact contours of these roof details and seamlessly incorporated all adjoining areas and drainage channels into a single monolithic membrane. Applied wet-on-wet in a single process, the liquid resin saturates a reinforcement fleece and cures to form a tough, flexible substrate that cannot delaminate. After completing the entire roof, red aggregate surfacing was applied to designated areas to create non-slip maintenance walkways.

"We needed a roof refurbishment that would improve the town hall's thermal performance and protect against water ingress" comments Tony Taylor from Barnsley Council. "The solution from Kemper System not only answered these requirements but, being sustainably sourced and solvent-free, also conformed to our environmental objectives and ensured that we could carry on using the building as normal without any unpleasant odours or disruption."



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