SIKA AT WORK

RESTORING HISTORY THROUGH ROOFS:
THE RENOVATION AND REDEVELOPMENT OF OXFORD'S ICONIC RHODES HOUSE

ROOFING: SikaShield® Hot Melt Structural Waterproofing system

BUILDING TRUST

RHODES HOUSE, OXFORD

SIKA, MARKET LEADING ROOFING TECHNOLOGY SUPPLIERS IN THE UK, PROUDLY WORKED ALONGSIDE BEARD CONSTRUCTION AND FENLAND FLAT ROOFING TO RESTORE AND UPGRADE MULTIPLE ROOFS ON A RENOWNED HISTORIC BUILDING.

Rhodes House, an iconic building in the heart of Oxford and owned by Oxford University, is steeped in history. Constructed in 1928 in memory of Cecil Rhodes, the house was designed to resemble a Cotswold mansion, surrounded by landscaped gardens and trees that are just as impressive as the building itself. It is home to one of the world's most prestigious international scholarship programmes, the Rhodes Trust, and has supported the education of world leaders, Nobel scientists and others at the forefront of their professions.

Plans were approved in 2020 to redevelop the Grade II listed building with the restoration of architecture and a complete renovation of the building's basement to create several new spaces. Delayed by the pandemic, it was not until 2023 that contractors Fenland Flat Roofing, in collaboration with Sika and under the architectural guidance of Stanton Williams, were tasked with carrying out significant roofing renovations. The aim was to fortify the durability of the roofs whilst preserving the historical and functional integrity of the building.

The exemplary quality of the work has recently been recognised at the National Federation of Roofing Contractors Award 2024, taking home the award for the Bituminous Hot Applied Liquid Waterproofing category.

Excavation works were carried out beneath the existing building to create larger, subterranean spaces that would house new lecture theatres. Two new pavilions were then created either side to become shops and high-end student accommodation. Altogether, the scope of the roofing works included three new roofs totalling a combined area of 1,271m^2.

Due to the nature of the building, there were several project challenges that needed to be overcome. The building was still in use during works, which meant comprehensive health and safety measures were crucial and storage was limited. Access was another challenge due to the city-centre location of the site. The landscaped trees surrounding the building are also listed, so moving materials around site had to be done with extreme care and precision.

High levels of thermal and acoustic performance were required due to the building's use, which meant that every material had to be picked with the utmost care. As subterranean buildings, effective waterproofing was also necessary, and a large volume of waterproofing needed to be installed at zero-degree falls. The waterproofing system also needed to cope with the huge weight of the pavilions and landscaping above.

The project featured complex and intricate upstand details, as well as curved concrete slabs with timber decks and hidden guttering, requiring a meticulously planned installation. Many raised access points required waterproofing, including guttering inside a skylight, which posed unique challenges itself due to the fragility of working next to glass, and the risk of melting the damp-proof membrane.

To overcome these obstacles, Sika's technical experts helped create a robust specification using the SikaShield® Hot Melt Structural Waterproofing system. The system consists of a primer (Sika® Igolflex® P-10 EL UK), two layers of waterproofing (SikaShield® Hot Melt 50/70, reinforced with SikaShield®), a protection layer (SikaShield® Roof Access Layer), insulation layer and a water flow reduction layer.

The high penetration primer was installed before the hot melt structural waterproofing was installed onto all structures, followed by an XPS inverted insulation board and layers of drainage. Due to the versatile and easy-to-use nature of the products, the SikaShield® waterproofing system was able to be installed successfully on all of the complex detailing without any incidents.

Sika's range of Hot Melt Structural Waterproofing roof systems are verified by the Code for Construction Product Information (CCPI), helping to provide assurance to product specifiers and users that all product information is clear, accurate, accessible, up-to-date and unambiguous.

Collaboration between Fenland Flat Roofing and Sika proved paramount on the project, with a member of Sika's team visiting the site fortnightly to carry out site inspections and answer queries. The client, Oxford University, will benefit from Sika's 20-year product guarantee for the Sikashield® Hot Melt Structural system, offering extra peace of mind for the future.

Completed in August 2023, it is thanks to the impressive workmanship and experience of Beard Construction, Fenland Flat Roofing along with the high-quality finish of the Sika roofing systems that Rhodes House can now usher in a new generation of thought-leaders. The high-quality product, along with the effective installation, means the roofs of Rhodes House are robust and practical, whilst still allowing the building to retain its important historic charm and legacy.

PROJECT PARTICIPANTS

Size: 1,271m^2
Client: University of Oxford
Contractor: Fenland Flat Roofing

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