SIKA AT WORK
COLD WAR BUNKERS, CAMBRIDGE

ROOFING: SikaShield® E74 underlay, SikaShield® E79, SikaShield® HB79,

SikaRoof Adhesive- 200, Sikatherm PIR GT

BUILDING TRUST

SIKASHIELD OFFERS AN IDEAL DEFENCE AGAINST WATER INGRESS FOR COLD WAR BUNKERS

Project Description

The abandoned legacy of the Cold War, a pair of nuclear bunkers in Cambridge are now owned by the University of Cambridge and in need of refurbishment and conservation. The Brutalist-style Grade II listed concrete buildings were originally designed as part of the UK's preparation for nuclear war. The initial 1950s structure, created as a bomb-proof war room, was extended in the 1960s to provide accommodation for a regional Seat of Government in the aftermath of a nuclear attack, one of only two known to have been built in the UK. Although there are no plans to utilise the 1950s building, both roofs have been refurbished to protect them from water damage and preserve the historic structures.

Project Requirements

A bituminous membrane was required that could be installed as an overlay on the existing failed felt covering and concrete deck. In line with the Grade II listed status of the structures, a like-for-like roof covering was required but the client wanted to take advantage of the opportunity to upgrade to advanced bituminous membrane technology to provide an extended service life.

For both buildings, a bituminous membrane system that could be specified in compliance with the NFRC's Safe2Torch guidelines was essential and the SikaShield® system provided an ideal choice, with both torch-applied and self-adhesive membranes included in the specification and a guaranteed 20-year service life. Underlay was installed in the perimeter areas only, followed by the SikaShield®E79 self-adhesive cap sheet to create a replacement welted drip detail. The SikaShield® HB79 torch-applied cap sheet was then installed without underlay across the remainder of the roof area.

Extensive repairs and preparation were also required, with blisters cut and sealed to enable the existing covering to be used as the air and vapour control layer (AVCL). Two layers of Sikatherm GT insulation board were then installed to bring the building up to current building regulations for thermal performance. The SikaShield E74 underlay was then installed across the roof area, followed by the SikaShield® HB79 cap sheet in the Safe2Torch zones and the SikaShield® E79 cap sheet in the exclusion zones.

Dave Stewart from RCC Ltd commented: "Using the SikaShield® system meant that we were able to extend the service life of both structures, tailoring the installation to meet the purpose of each building, while delivering a refurbishment that references the original materials used for the Grade II listed properties."

Project participants

Contractor: Roofing Contractors Cambridge (RCC) Ltd

Roofing Client: University of Cambridge

Size: 1800m2

Products: Sikatherm® GT flat insulation board, SikaRoof Adhesive-200 , SikaShield® SA 730 self-adhered underlay, SikaShield® HB79 torch-applied cap sheet, SikaShield® E79 self-adhesive cap sheet.

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