

St Margarets Primary School

LOCATION

Ipswich, Suffolk

CLIENT

Dayle Bayliss Surveyor

SECTOR

Education

PROJECT TYPE

Refurbishment

ACCREDITED INSTALLER

SJ Soar



Project Overview

St Margaret's Primary School required a full refurbishment of the office roof area following persistent water ingress and the failure of the existing waterproofing system. Axter Ltd was appointed to undertake a detailed condition survey and provide a fully compliant warm roof refurbishment system.

The existing roll-and-pour bituminous waterproofing had reached the end of its service life, with widespread deterioration and inconsistent deck construction identified across the roof area. Axter delivered a complete design and specification package before the installation of a new warm roof system by Axtershield installer SJ Soar, ensuring long-term performance and compliance.

Challenges

Axter's intrusive survey identified several issues affecting both performance and safety. The existing waterproofing showed extensive cracking and surface degradation, with leaks reported internally. Core sampling revealed a combination of cold roof construction and fragile ply-faced PIR insulation boards laid directly onto joists, creating non-load-bearing zones.

Poor drainage resulted in standing water due to inadequate falls and blocked outlets, increasing structural loading. Additional challenges included defective counter-flashings, insufficient upstand heights and rooflight kerbs that were incompatible with a modern warm roof build-up. An adjoining pitched slate roof required removal and structural infill to allow the refurbishment works to proceed.

Systems Used.

The Axter Excel warm roof system was specified for its proven performance in refurbishment applications and its British Board of Agreement (BBA) certification. The system delivers BroofT4 fire performance and long-term durability through a reinforced bituminous membrane construction.

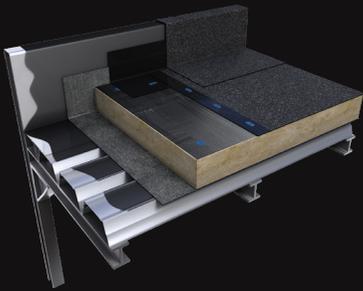
A tapered PIR insulation scheme was incorporated to achieve a U-value of 0.18 W/m²K in line with Part L requirements, while also improving drainage and ensuring consistent thermal performance across the roof.



Systems in use

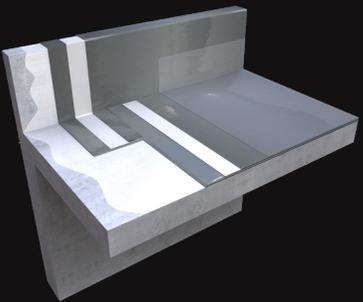
Excel®

A premium range of high performance reinforced bitumen waterproofing membranes. Our most technologically advanced RBM system.



Starcoat PMMA®

A flame free and rapid cure, two component polymethyl methacrylate (PMMA) resin waterproofing system that provides a fully adhered waterproofing layer.



Solutions

Axter provided a complete refurbishment, beginning with the removal of the existing waterproofing, fragile insulation and the redundant pitched slate roof section. The exposed structure was prepared to receive a new deck, designed and installed in accordance with BS 6229:2018, creating a stable and fully load-bearing substrate for the new warm roof system.

To address the significant ponding identified during the survey, a tapered PIR insulation scheme was designed to provide falls of 1:60 in line with BS 6229 guidance. This improved drainage to the existing outlets, reduced static loading and enhanced the long-term performance of the waterproofing system.

Thermal performance was significantly improved through the installation of high-performance insulation, reducing heat loss and supporting compliance with Approved Document L. All waterproofing interfaces were redesigned in accordance with Axter detailing standards, resolving historic issues with low upstands and inadequate kerb heights beneath windows.

Cold-applied PMMA liquid waterproofing was used at all Safe2Torch risk zones, providing a flame-free solution at sensitive details. The parapet interface adjacent to the existing single-ply roof was also re-established to deliver a robust and weather-tight termination.

Axter quality assurance inspections were carried out throughout the project, ensuring full compliance with the approved specification and workmanship standards. The completed roof refurbishment is covered by a 30-year Axter guarantee encompassing design, materials and installation, providing long-term assurance for the client.

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Axter were integral with the design and specification for the flat roof, which included a full strip of the existing covering and timber decking, removal of an existing pyramid slated roof area to create a flat deck, before a tapered insulation scheme was installed along with an Excel RBM system to meet current Building Regulations. The project was demanding in terms of time scale due to the work being undertaken over the Easter break. The materials were delivered on time as promised, and Sam Heard from Axter Ltd was always on hand to keep us updated with delivery dates.

Stephen Soar

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