



WHICKHAM POLICE STATION

WATERPROOFING: Eurorof Torch-On & SolaCell

PROJECT SIZE: 230m²

PROJECT LOCATION: Northumbria

EUROROF
SOLUTIONS

SOLACELL
BY ALUMASC

Your Complete Roofing Solution

Environmentally Focussed | Responsibly Sourced | Ethically Driven



ALUMASC
ROOFING

WHICKHAM POLICE STATION, NORTHUMBRIA



Project Overview

A sustainable roofing package from Alumasc Roofing has played a significant part in the decarbonisation of Whickham Police Station in Newcastle-upon-Tyne.

Delivered by main contractor Arcas Building Solutions for Northumbria Police, the renovations were secured with funding provided by Salix, on behalf of the Department for Energy Security and Net Zero, in-line with government objectives to mitigate climate change and meet net-zero targets.

Energy-efficient products and building methods have future-proofed the station, creating a more comfortable working environment for police personnel, and substantially improving the building's overall energy performance.

The System

Alumasc submitted a detailed specification for the Eurorof Torch-On high-performance roofing system. It was chosen for its suitability with Whickham's existing concrete deck substrate, and for the significant contribution it would make to the thermal upgrade of the building.

The Eurorof Torch-On system comprise a premium torch applied reinforced APP polymer modified bituminous waterproofing membrane. The build-up includes underlays, insulation boards, and air and vapour control layers (AVCL), resulting in enhanced performance properties, including flexibility and increased resistance to UV degradation.

Eurorof is subject to the highest levels of certification and testing, offering BBA Approval and Fire Classification to BROOF (t4) in accordance with BS EN 13501-5.

Alumasc's Registered Contractor, Springs Roofing of Chester-le-Street, installed a total of 240m² of the Eurorof System, across three separate roofing areas. The existing system build-up had been performing poorly in terms of heat loss, so to vastly improve energy efficiency, the new build-up was installed with a 130mm GTF PIR insulation.

To complete Alumasc's energy-efficient roofing solution, new solar panels were accommodated using Alumasc SolaCell PV mounting supports, which were integrated into the waterproofing system. Alumasc SolaCell provides an integrated, custom-engineered solution benefitting from penetration-free assembly on the roof, ensuring waterproofing performance remains uncompromised.

Outstanding Results

The replacement of the roof at Whickham Station, using Alumasc's Eurorof system, has brought about major reductions in carbon emissions, lower energy bills, and a significant improvement in the overall U-values of the building.

The previous build-up had only achieved a U-value of 4.0 W/m²K, indicating poor insulation and high levels of heat loss. The new Eurorof system installed with GTF PIR insulation, achieves a U-value of 0.8 W/m²K, representing an immediate positive impact on thermal performance.

This improvement is being reflected instantly in the building's energy use. The overall energy bill with the previous roof build-up was approximately £2,351 per annum. Following the roof refurbishment, and the installation of solar panels, the expected energy bill is only £105 per annum – a major cost saving of £2,246 per year.

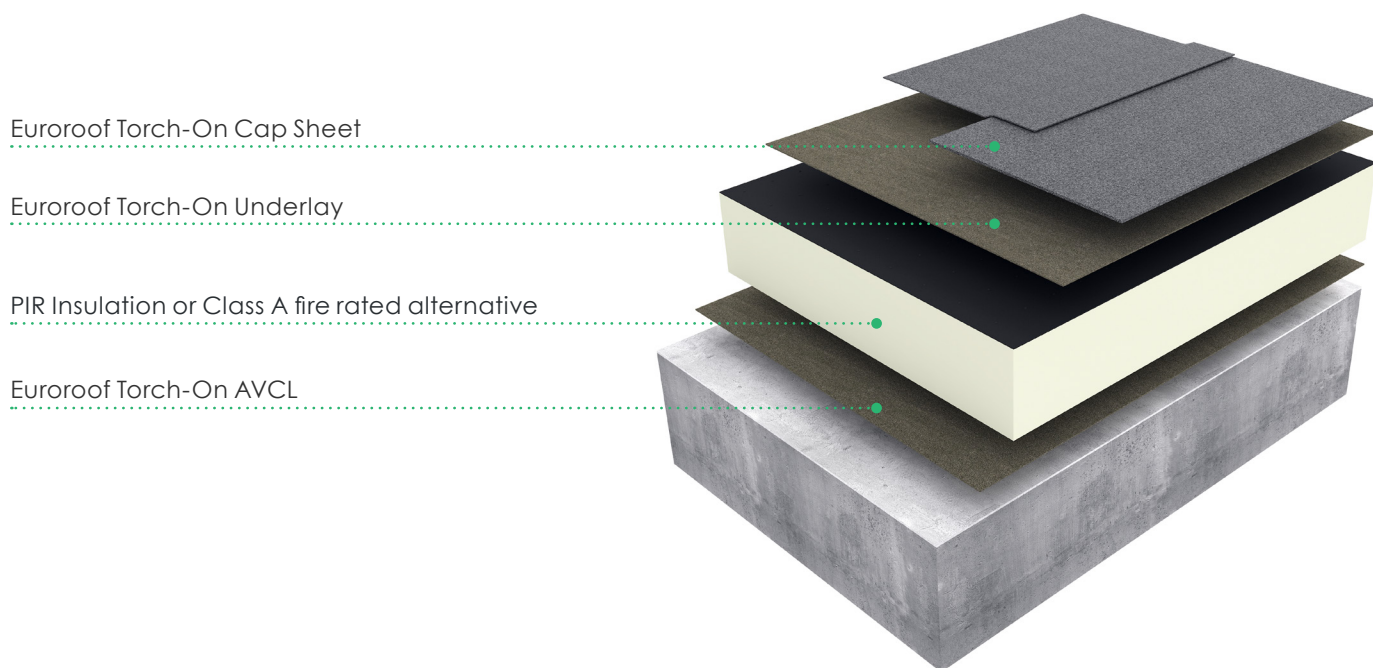
The building's overall carbon emissions were 6,868kg CO₂ per year with the old roofing system. These have been reduced to 309kg CO₂ per year; an annual saving 6,559kg CO₂.

Multiple teams within Alumasc, including the sustainability division, were responsible for working alongside the client and Springs Roofing, to ensure the successful delivery of the Whickham Police Station roofing refurbishment. The Eurorof system is further supported by Alumasc's 25-year warranty, safeguarding the building's outstanding thermal performance and providing peace of mind to the client and their building users, well into the Station's future.

Specified system

Eurorooftorch-On Cap Sheet

Eurorooftorch-On High Performance Roofing Systems consist of a premium torch-applied, reinforced APP polymer-modified bituminous waterproofing membrane, along with underlays, insulation boards, and air and vapour control layers (AVCL), all of which are subject to the highest levels of certification and testing.



Features & Benefits

- ✓ Flexibility of product specification
- ✓ Robust, proven durability
- ✓ Life expectancy of at least 25 years
- ✓ Warranty cover up to 25 years

Approvals

- ✓ BBA Certificate No. 24/7275
- ✓ Fire classification of B_{ROOF} (t4) in accordance with BS EN 13501-5



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