



CASE STUDY

Triflex

Delivering solutions together.

ROOF REFURBISHMENT
ROYAL ALBERT HALL, LONDON

ROYAL ALBERT HALL

Authorised Contractor

C&W Industrial Roofing Services Ltd

Area

1,500m²

Main contractor

Overbury

Systems

Triflex ProTect®
Triflex ProDetail®

Building surveying practice

FFT - Faithorn Farrell Timms LLP

Scope of work

Refurbishment of gallery roof

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Overview

The existing 1,500 m² asphalt roof at the Royal Albert Hall in London, required an overlay with particular care to the expansion joints in order to allow for movement within the building.

The roof area, known as the 'Gallery Roof', is located at the base of the iconic glazed dome and is primarily used for maintenance access purposes. Due to heritage reasons, it was important that the overlay was colour matched to the existing asphalt roof for a uniform finish, and to preserve the Gallery Roof aesthetic of this landmark Grade 1 listed building.

The challenge

Surveying practice, Faithorn Farrell Timms LLP, invited Triflex UK Ltd to carry out a site survey of the oval flat roof at the prestigious Royal Albert Hall in London.

The existing roof comprised of asphalt, which was showing signs of degradation. In certain places, splitting and cracking along the location of the underlying structural members and at upstand details was visible. The roof though was largely sound. These are common issues with asphalt roofs nearing the end of their service life. Years of exposure to UV, thermal cycling and weathering can cause shrinkage and tension in the membranes. Without addressing these issues, water ingress will likely occur, potentially causing damage to the historical building beneath.



The challenge

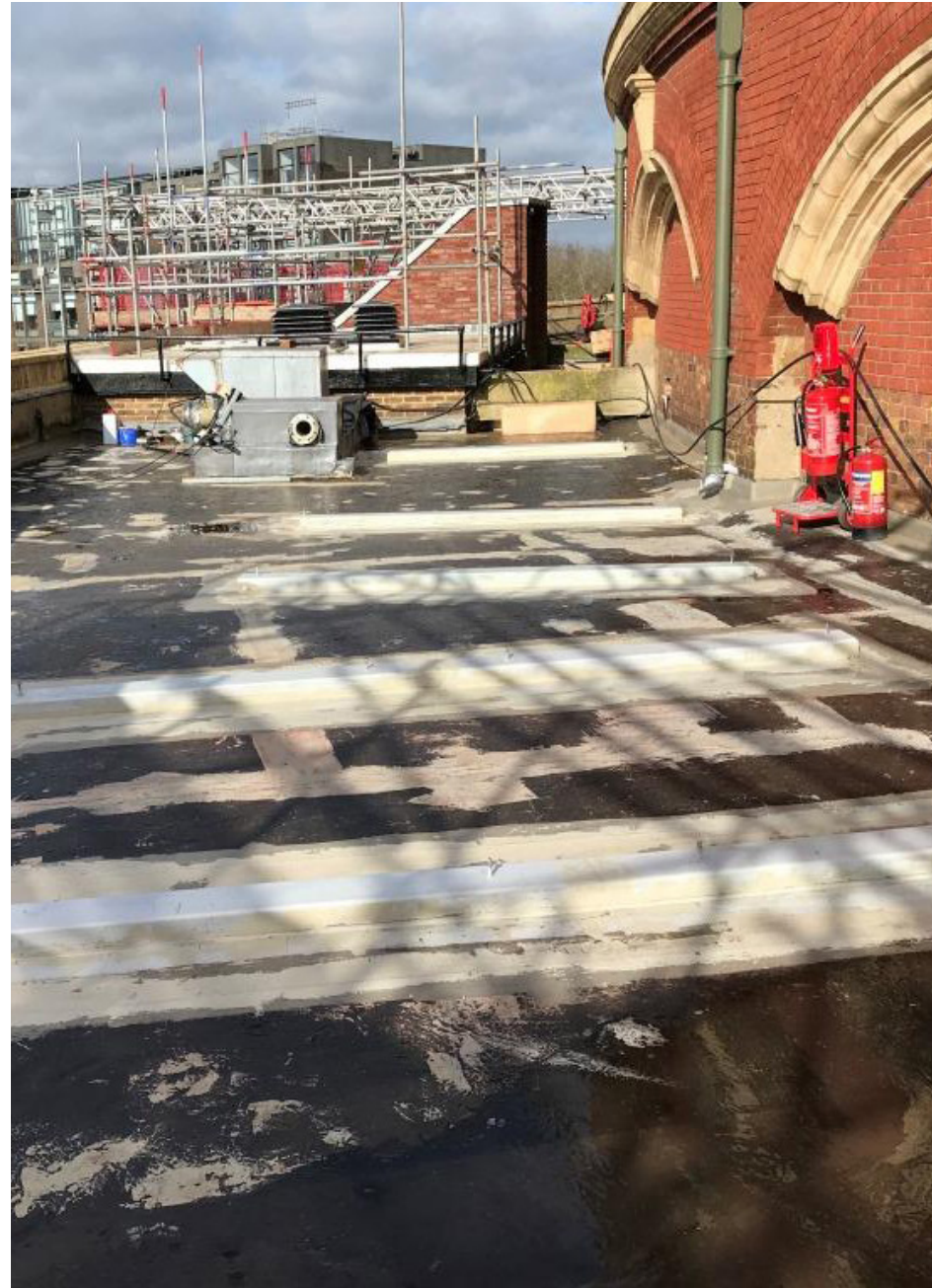
Triflex field technicians carried out a full and detailed on-site investigation to assess the condition of the roof. To aid the specification process, several tests were conducted, including core and peel adhesion tests.

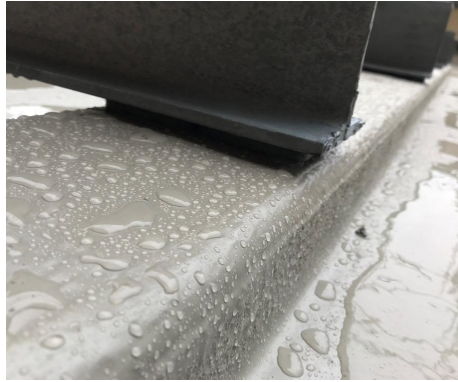
Core tests involved carefully removing a 'core' or section from the roof to establish the existing build-up above the primary substrate. It allowed us to reveal whether the build-up was consistent across a number of core locations. It also determined whether there were any underlying or undetected issues. In addition, this allowed Triflex to complete a condensation risk analysis as well as establishing the approximate u-value of the existing build-up.

In this case, the asphalt was discovered to have been installed over a cementitious concrete topping and a separating layer was present. The thickness of the asphalt was on average c.a. 20mm thick and had been installed in one layer, indicating that any falls built into the structure were included within the concrete topping. At approximately 20mm thick, this was a waterproofing mastic asphalt. Therefore, the asphalt and underlying substrate condition were suitable to be overlaid with the Triflex System. In addition, testing carried out on the coated upstands and details of the roof revealed that the asphalt here too was suitable for overlay.

Triflex Systems are fully compatible with asphalt and have been used to successfully overlay many roofs, reducing the costs, risks, and disruption of removal.

These tests provided cost certainty and confirmed the required preparation, pre-treatment, and priming method. Some repair work was necessary before overlay could take place.





The solution

Following testing, the works commenced in January 2020. It was specified that the best course of action was to overlay the asphalt roof with Triflex ProTect and Triflex ProDetail for all details and penetrations. The solution incorporated expansion joints to allow for the natural movement of the building.

Triflex ProTect is a fully fleece reinforced system based on the most advanced PMMA resins. The BBA and ETA certified system is fully compatible with most substrates, and provides a seamless, reliable waterproofing membrane proven to perform. The system is totally cold applied, rapid curing, including being rainproof after 30 minutes. It can also be installed in temperatures down to 0°C, allowing works to be completed throughout the cold winter months.

Detailed areas needed a specialist solution. The solvent-free Triflex ProDetail was specified to waterproof all details and penetrations. Triflex ProDetail is a fleece reinforced system, with a thixotropic formula that allows it to be installed onto vertical surfaces. It is ideal for waterproofing upstands, gutters, and roof penetrations.

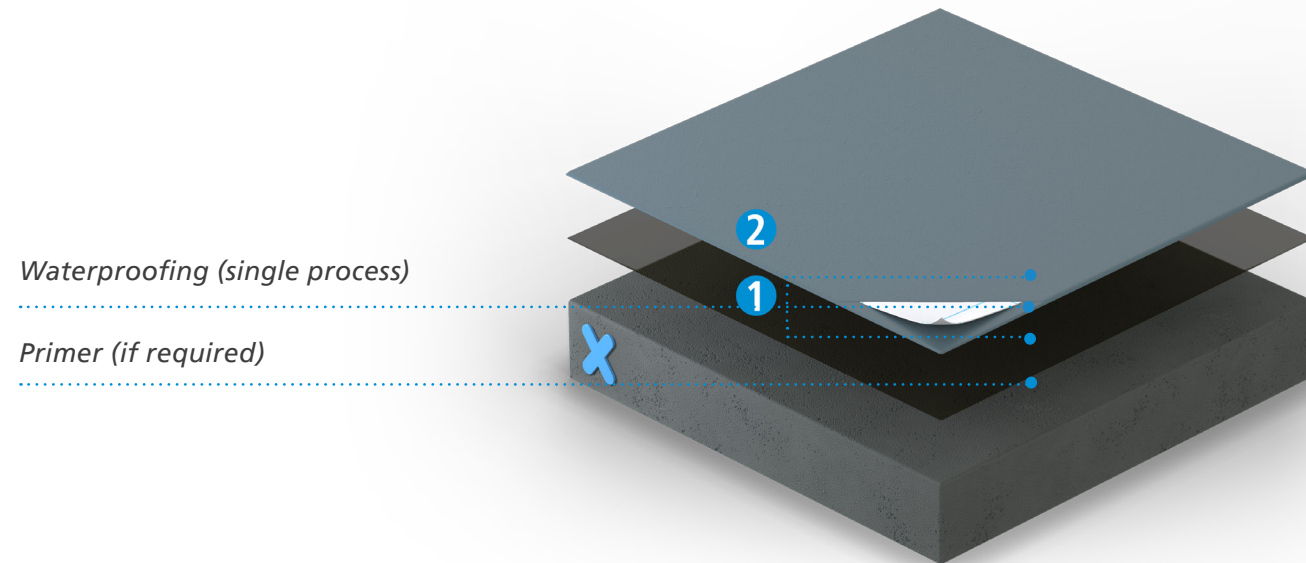
Due to the rapid curing ability of Triflex materials, and its suitability to be installed in low temperatures without extending cure times, on-site works were able to commence during the winter period. With the capability to custom colour match, the new waterproofing system now seamlessly matches the remainder of the asphalt roof.

All works were completed on schedule and to a very high standard by Triflex Authorised Contracting Partners, C&W Roofing Services Ltd.

System benefits

Triflex ProTect®

- Totally cold applied, with no risk from hot works
- Compatible with virtually all roof substrates
- Suitable for all roof build-ups and applications
- Exceptionally rapid curing / rainproof times, even at low temperatures
- Fully reinforced waterproofing technology
- Suitable for zero pitch, completely flat and pitched roofs
- Simple, single process waterproofing application
- Hydrolysis (standing and ponding water) resistant



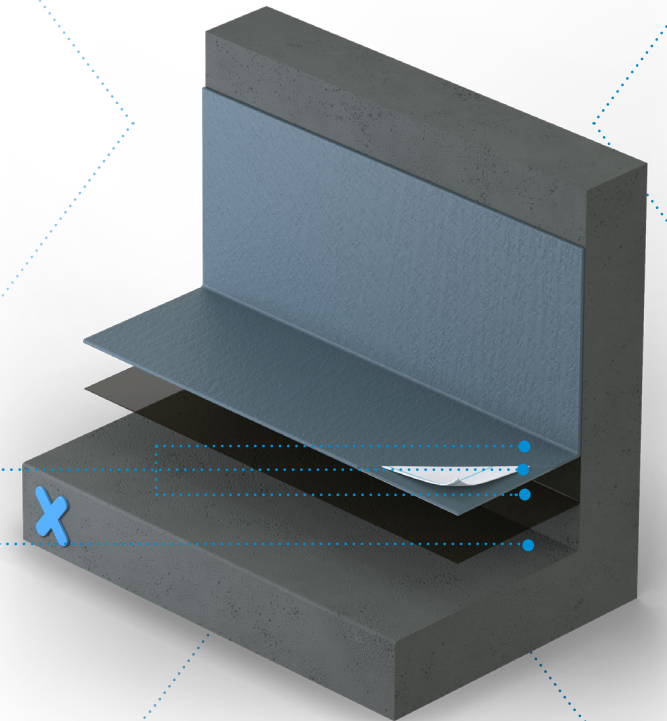
System benefits

Triflex ProDetail®

- Waterproof down to the smallest detail
- Compatible with virtually all substrates including asphalt
- Cold applied, fast curing with rapid installation
- Simple, single process waterproofing application
- Rapid curing system - even at low temperatures
- Fully reinforced technology
- Certified to the highest standards

Waterproofing (single process)

Primer (if required)





Delivering solutions together.

Triflex is the leading European specialist in cold liquid applied resins. Our high-quality systems provide reliable and lasting waterproofing, surfacing, protection and markings for roofs, walkways, balconies, terraces and car parks. We are a family owned and operated company that provides individual solutions worldwide. From our production facilities based in Minden, Germany, we have been researching and developing solutions designed to protect and repair the built environment for more than 40 years.

From our UK headquarters based in Stone, Staffordshire we pride ourselves on providing our clients with tailored solutions and exceptional levels of service and support throughout all stages of their project. From conducting in-depth site surveys, to our comprehensive testing and off-site and on-site support, we ensure that your project is completed on time and to the highest standards. All Triflex solutions are certified to the highest standards and are backed up by long term meaningful warranties ensuring peace of mind.

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