

CASE STUDY

Triflex

Delivering solutions together.

ROOF REFURBISHMENT
BRISTOL

DURDHAM DOWN WATER TOWER

Authorised Contractor:

Concrete Repairs Ltd /
The Complete Roofing Company

Area

500m²

Systems

Triflex ProTect®
Triflex ProDetail®
Triflex Asphalt repair kit
Triflex StairCoat Eco

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Introduction

Bristol Water's Durdham Down water tower is iconic in the local landscape. Built in the 1950's the 12 sided reinforced concrete structure was in need of renovation to ensure storage of potable water and continued local supply.

The challenge

Bristol Water's external condition report highlighted a need for repair work and external coating to prevent further and ongoing deterioration of the water tower. Triflex were consulted on waterproofing and improvements to the roof structure.

The concrete roof structure is formed in a spoke arrangement, echoing the fin piers. Existing drainage channels were filled with asphalt and the cement forms had been painted at some time in the structure's history. With layers peeling, it was in need of renovation and waterproofing to ensure the water towers integrity for years to come.

With a range of telecoms equipment located on the roof, regular access is required for maintenance purposes and therefore the safety of operatives needed to be considered in the selection of finish. Additionally, improvement to the internal concrete stair to ensure the safety of workers accessing the roof was considered.

The height, size and awkward access was also a consideration for materials and workforce installing the system.





The solution

The complexity of form means that liquid applied waterproofing was the ideal choice for waterproofing the roof structure. Triflex ProTect is proven to adhere to many substrates. The Triflex technical team were able to establish the performance of the Triflex ProTect directly to the coated concrete through peel and adhesion tests. In this instance, the concrete simply required a light grind and clean to ensure removal of any very uneven or dripped historic coating.

The prepared surface was then ready to be overlayed with the Triflex ProTect® system. Triflex ProTect is a fully fleece reinforced system based on the most advanced PMMA resins that is both BBA and ETA certified and has the additional advantage of being completely solvent free.

The cold liquid applied system provides a seamless, reliable solution that has been tried and tested under some of the harshest conditions. The project was confidently completed in the winter months, starting in January and completing in March as the system cures down to 0°C, allowing work to continue in the cold temperatures.

The waterproofing also had to accommodate several fiddly protrusions. The railings, lightning conductor straps and cable trays were lifted, the roof waterproofed underneath and then reinstated.

Due to the system's ultra-fast curing abilities, not only was the roof rainproof in as little as 30 minutes, but also the management of the many surface structures and services was quickly and easily accommodated.



The solution

Triflex ProDetail® was also specified as a specialist system to waterproof the many detailed areas. Triflex ProDetail is a fleece reinforced system that is ideal for waterproofing upstands, gutters and roof penetrations due to its thixotropic formula, allowing it to be installed onto vertical surfaces.

The existing asphalt filled drainage was also treated with Triflex Asphalt repair mortar to improve the gutter levels that run through beam to beam walls. The gutters were then treated with the Triflex ProTect system, the same as the rest of the roof ensuring a continuous finish. With Triflex ProTect provided in 20kg drums, and Triflex ProDetail in 10kg drums, materials were easy to transport up to the roof as required.

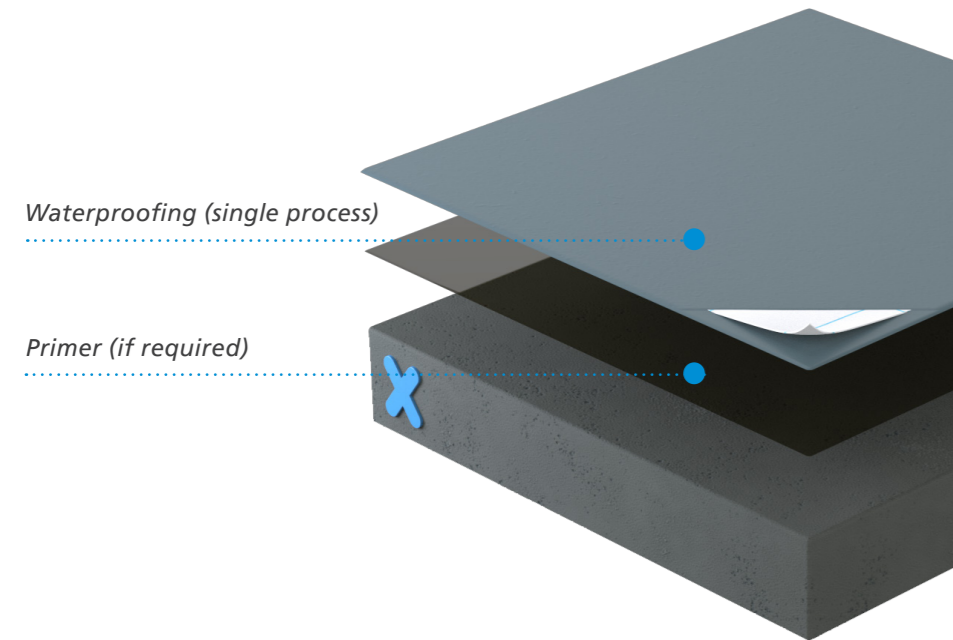
An anti-skid finish was applied to the Triflex ProTect system to demarcate designated access areas of the roof. The low slip potential (PTV>36) will improve the safety of persons accessing the roof for maintenance of telecoms structures. In addition, the existing concrete internal stair treads were overlaid with the Triflex StairCoat Eco system. The rapid setting PMMA resin based system with embedded quartz provides a long lasting and robust anti slip finish to the stair treads.

Finally, a nosing colour was applied to the internal stairs in traffic yellow further improving the visibility of the stairs in the water tower. Triflex Friction Plastic is a heavy duty textured marking and coating system, with a rapid cure and single process application. With a tough and durable finish and very high anti skid properties, not only will the stairs remain in great condition, but the safety of all those who use will be ensured for years to come.

The project was completed to a high standard by The Complete Roofing Company in conjunction with CRL (Concrete Repairs Ltd). Triflex provided technical support, advice, specifications, and regular site visits as part of the Triflex service provision.

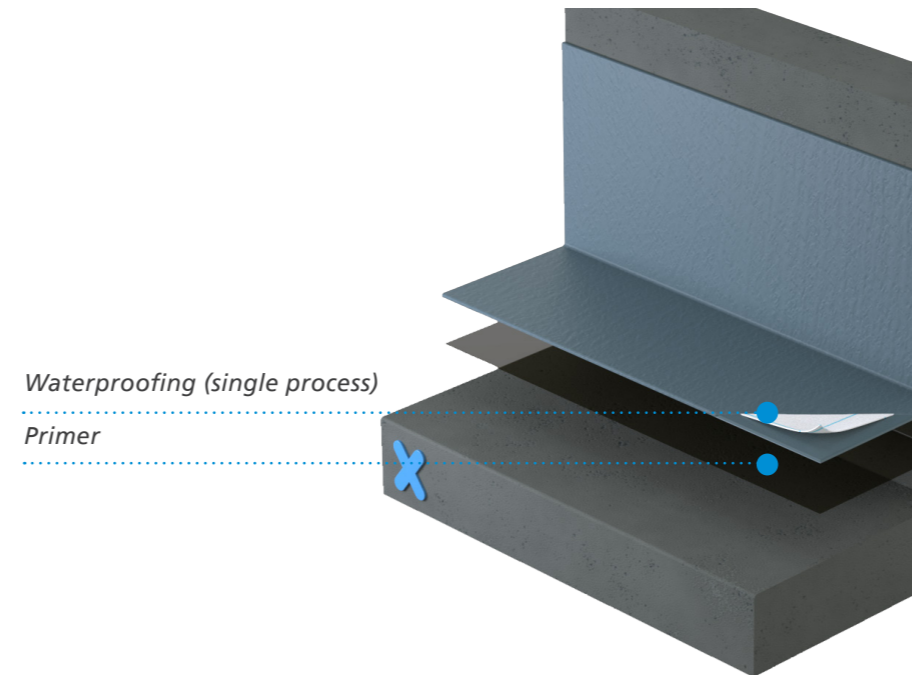
System benefits Triflex ProTect®

- 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



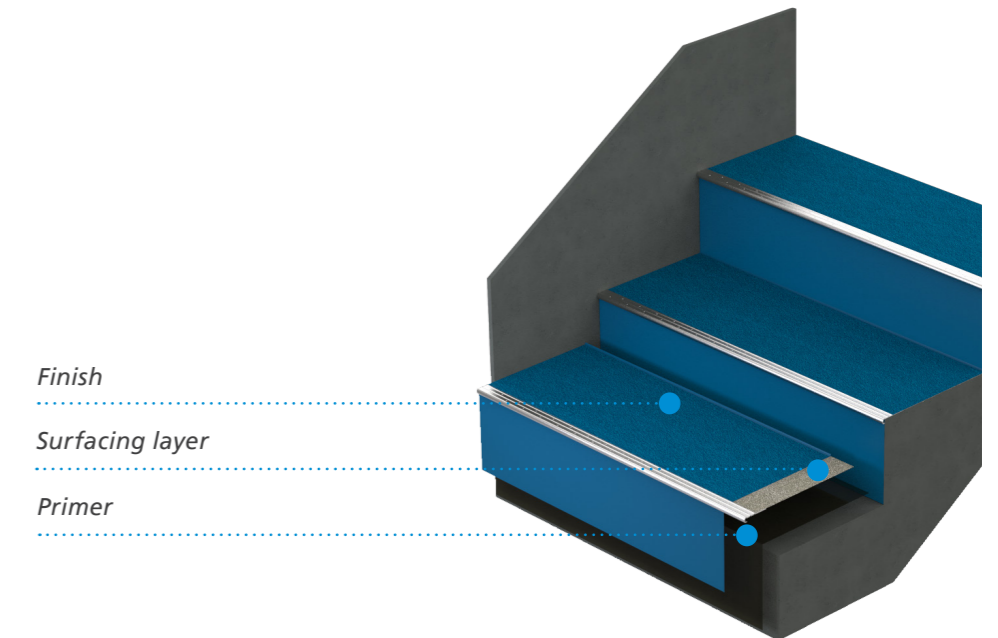
System benefits Triflex ProDetail®

- 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



System benefits Triflex StairCoat Eco

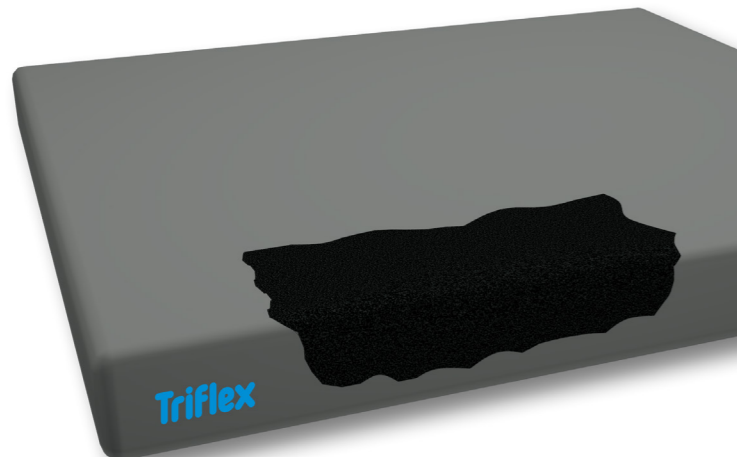
- Waterproof down to the smallest detail
- Compatible with virtually all substrates including asphalt
- Cold applied, fast curing with rapid installation
- Simple, single process waterproofing application
- Rapid curing system - even at low temperatures
- Fully reinforced technology
- Certified to the highest standards
- Anti-skid (HSE low slip potential) with high retention of PTV over time



System benefits

Triflex Asphalt Repair Kit

- 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
- Tough and durable
- Withstands high mechanical loads
- Resistant to chemicals
- UV Resistant
- Solvent and isocyanate free



Triflex

Delivering solutions together.

Triflex is the leading European specialist in cold liquid applied waterproofing, surfacing and marking resins. Our high-quality systems provide reliable and lasting waterproofing, surfacing, protection and markings for roofs, walkways, balconies, terraces, car parks, roads and infrastructure.

We are a family owned and operated company that provides tailored 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 and Ireland 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, expertly. Triflex solutions are certified to the highest standards and are backed up by long-term meaningful warranties, ensuring peace of mind for years to come.

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