



Delivering solutions together.

SINGLE-PLY OVERLAY TO A WARM ROOF OF A
SHOPPING CENTRE

CAPTAIN COOK SQUARE MIDDLESBROUGH

CASE STUDY

Authorised Contractor:
Central Roofing & Building
Services Ltd

Systems
Triflex ProTect®
Triflex ProDetail®
Triflex ProFibre®

Area
6,500m²

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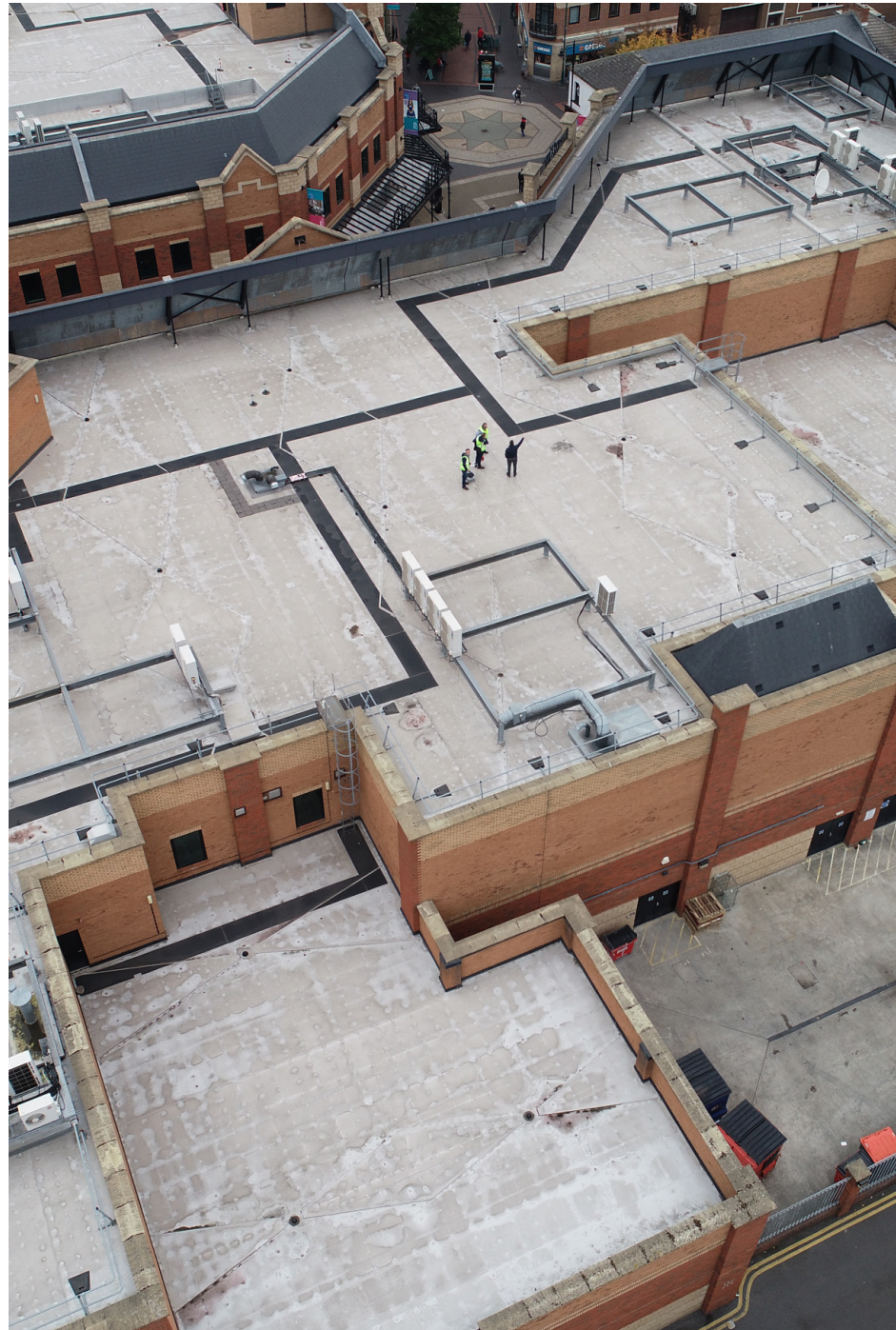
The challenge

The existing substrate comprised of a 20-year-old single-ply membrane which had surpassed its service life and had begun to deteriorate, visibly splitting at the seams and in detailed areas. These issues can be common in single-ply roofs that are near the end of their life. Years of exposure to UV and weathering can cause shrinkage and subsequently create adhesion issues. Without a new waterproofing membrane it was clear that the roof would start to ingress water, which could cause damage to the retail outlets below.

A full on-site investigation was carried out by the Triflex Field Technician Team. During the investigation a number of tests were conducted to aid the specification process, including core, peel adhesion and a plasticiser migration tests.

Core tests involve removing a 'core' from the roof substrate to establish the existing roofs build-up. It also allows us to reveal whether there are any underlying or undetected issues. In this case the build-up consisted of a concrete foundation, insulation and a single-ply waterproofing membrane. The core also revealed that the insulation was still in a good condition and would not require replacement.

In the majority of instances, Triflex is fully compatible with single-ply. However, we believe that as a responsible manufacturer it is necessary to conduct peel adhesion tests to ensure compatibility and that a lasting, high quality solution can be provided. Furthermore, peel tests allow us to identify whether the existing substrate requires pre-treatment or priming to create the best possible bond. Our tests revealed a high level of compatibility between the existing single-ply and Triflex, and that it was suitable to be directly overlaid without the use of primers.





The challenge

Lastly, a small amount of the existing single-ply membrane was sent to the Triflex Research and Development Centre in Germany to test for evidence of plasticiser migration. Plasticisers are additives which lower the glass transition temperature (the temperature at which a material will become brittle and potentially break) but are often used to make materials more pliable.

Single-ply if overlaid with plasticiser present, can cause cracks to appear in the new waterproofing solution. If this were the case the existing single-ply would require removal. Fortunately no plasticiser was present in the single-ply, ensuring it could be overlaid without issue, saving the client significant costs in removal, disposal and time.

The solution

One year after the testing had been completed, the client confirmed that funding for the project had been received. Thanks to the in-depth survey and testing provided, we were invited to present a project specification for a roof overlay solution based on the findings of our testing. At this point Triflex Authorised Contracting Partners, Central Roofing and Building Services Ltd. were brought on to the project.

Prior to conducting the works, Central Roofing and Building Services Ltd. carried out their own pre-construction drone survey. This coupled with the Triflex project specification provided the client with a thorough understanding of the scope of the project and additional faith in the installation process proposed.

Triflex ProTect was specified to overlay the single-ply roof. Triflex ProTect is a fleece reinforced system. It is fully compatible with single-ply and provides a seamless, reliable waterproofing membrane. The system is totally cold applied, rapid curing, including being rainproof in as little as 30 minutes and can be installed in temperatures down to 0°C. This allows works to be completed throughout the cold winter months. Triflex ProTect is also BBA certified and is expected under normal service conditions to provide durable roof waterproofing with a service life in excess of 25 years.





The solution

Detailed areas needed a specialist solution. Triflex ProDetail and Triflex ProFibre were 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 and even inverted surfaces. It is ideal for waterproofing upstands, gutters and roof penetrations. Triflex ProFibre is a detailing waterproofing system that contains individual fibres within the resin, when applied they interlock to provide additional strength. It is ideally suited to extremely complex details and penetrations that are either not possible to waterproof with Triflex ProDetail or are in hard to reach areas and impractical to fleece reinforce.

On-site works commenced in September 2019, initially the heavy rain experienced in late September and early October restricted progress, but the rapid cure of the Triflex materials and suitability to be installed in low temperatures helped to keep the project on track.

James Bartlett of Central Roofing and Cladding Ltd. comments

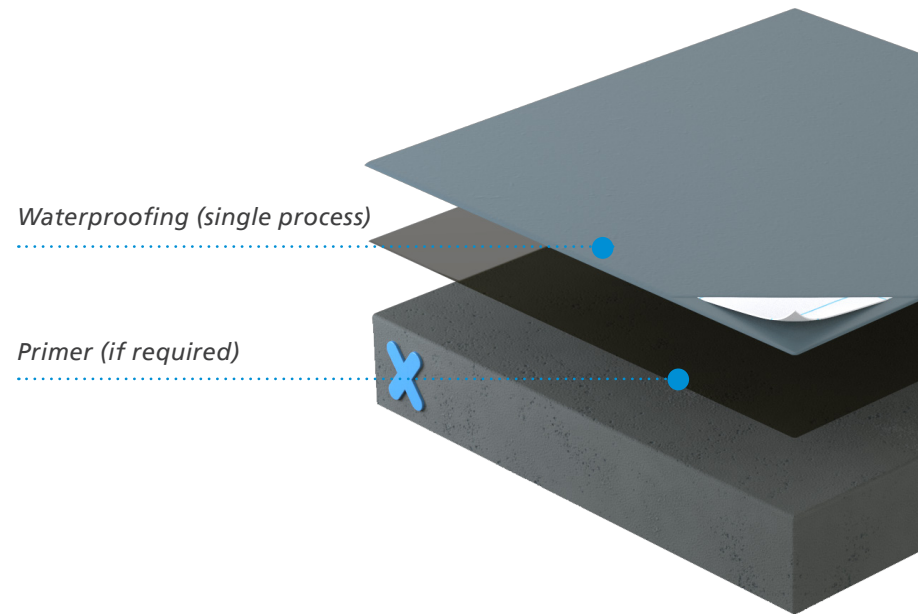
“The Triflex waterproofing systems were easy to install and helped to keep the project on track. The support provided by the team at Triflex is exceptional”.

Tom Walker of JLL was pleased with the testing and specification services provided by Triflex, commenting,

“The project support provided by Triflex during the specification stage ensured that no challenge remained unforeseen. Thanks to the testing conducted I was confident that the Triflex waterproofing systems would provide a lasting overlay solution.”

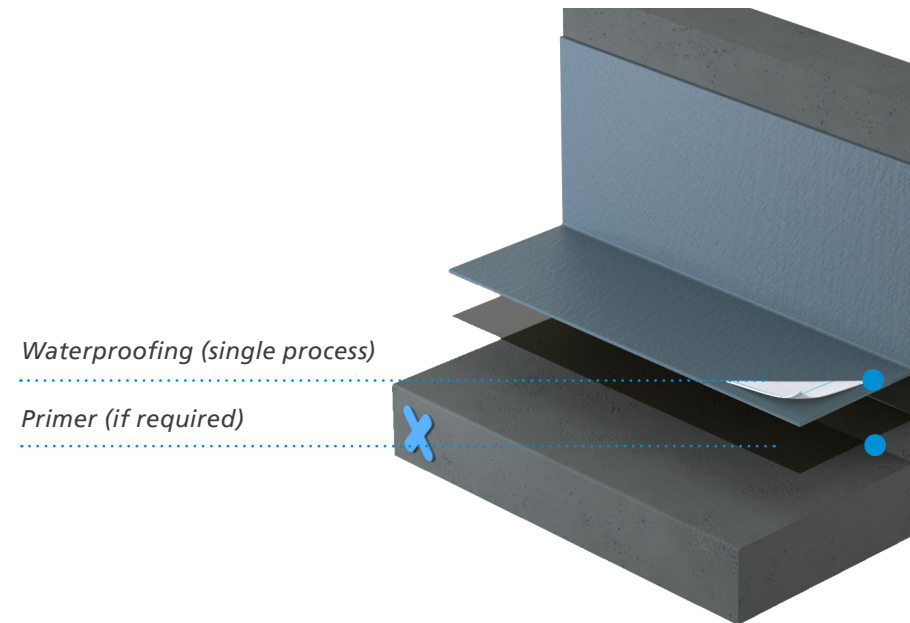
System benefits Triflex ProProtect®

- 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



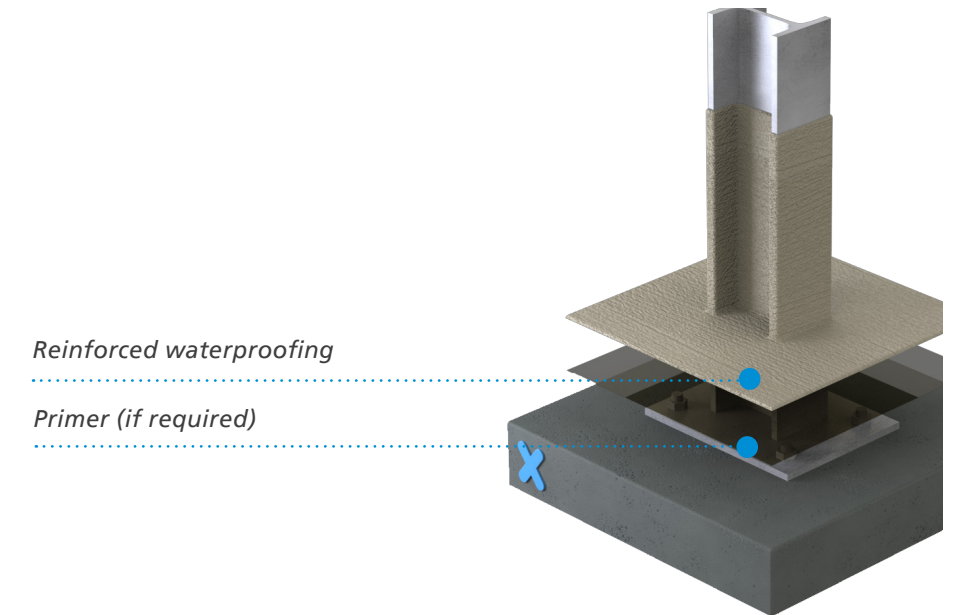
System benefits Triflex ProDetail®

- 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
- Designed for foot traffic and provides exceptional puncture resistance



System benefits Triflex ProFibre

- 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
- Fibre reinforced technology
- Simple and easy to apply





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, including the water industry.

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, Triflex delivers the highest standards.

Triflex solutions are certified to the highest standards, ensuring peace of mind for years to come.



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