

# Triflex

Delivering solutions together.

ROOF TERRACE REFURBISHMENT

# ST AGNES SCHOOL MANCHESTER

## CASE STUDY

**Authorised Contractor:**

RCS Roofing Ltd

**Area:**

600m<sup>2</sup>

**Specifier company / name:**

Manchester City Council

**Systems:**

Triflex ProTerra<sup>®</sup> Insulated

Triflex ProDetail<sup>®</sup>

Triflex FlexSealer

**Main Contractor:**

J Greenwood (Builders) Limited

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# Introduction

St Agnes C.E Primary school is located in the Longsight area of Manchester. The vibrant school serves the community with around 470 pupils enrolled.

This multi-storey school building utilises a roof terrace as an outdoor learning area. Originally the terrace roof build-up included an overburden of slabs. However due to water ingress into the building below and subsequent investigations, these were removed. Upon exploration it was found that the incumbent mastic asphalt waterproofing system (with felt at upstands), had failed. Consequently, the existing cross laminated timber deck and adjacent wall construction had started to rot and required replacement.

Following remedial works that included the replacement of new timber cassettes, Triflex were invited by RCS Roofing, working for main contractor J Greenwood (Builders) Limited, to propose a waterproofing solution to meet the needs of the primary school to ensure a watertight structure. The urban primary school has little outside space and needed to reinstate this important asset to enhance the learning environment for its pupils.





# The challenge

The new roof required a an insulated terrace solution that would suit the needs of the school now, as well as future possible uses. Today, the school wanted an overburden of astro turf, but in the future the terrace area may be directly trafficked. The new waterproofing system was considered for both scenarios. The refurbished external learning space also incorporated a new canopy, ensuring its utility for most of the school year.







# The solution

Triflex worked closely with Triflex Authorised Contractor, RCS Roofing Ltd, Manchester City Council and St Agnes School to provide a bespoke project specification proposal to suit the needs of the project. Information from the Triflex on site survey, together with data provided for the timber deck led to a proposal for the fully reinforced Triflex ProTerra insulated system with Triflex ProDetail, reinforced waterproofing for details.

Whilst the Triflex cold liquid applied waterproofing membrane is hydrolysis resistant, the insulated terrace system incorporated a tapered insulation scheme to facilitate drainage. The roof terrace build-up includes a tongue and groove joined board over the surface of the high quality insulation, providing an impact resistant substrate for the cold liquid applied waterproofing membrane and durable surface. The system incorporated Triflex Quartz finish, offering an anti-skid surface if directly trafficked in the future.

The chosen astro turf overburden was fixed with adhesive, so as not to penetrate the homogeneous and seamless waterproofing system below. Certified for long term protection, the Triflex ProTerra insulated system also provided improved thermal U values that exceeded current building regulation requirements.

Thought was given to accessible thresholds befitting of the inclusive design aims for the refurbished roof terrace. The thresholds and upstand heights meant that the terrace's drainage required careful consideration due to the challenging limitations of the access points and doorways. To address, boxed gulleys were created that were recessed into the insulation. The astro turf overburden also needed to sit flat on the surface in a uniform layer to provide a safe surface. This was achieved by the use of innovative metal cover plates that created a flush surface when inserted into the box gulleys. The astro turf could then be laid over the top of the even surface, keeping users safe from trip hazards.

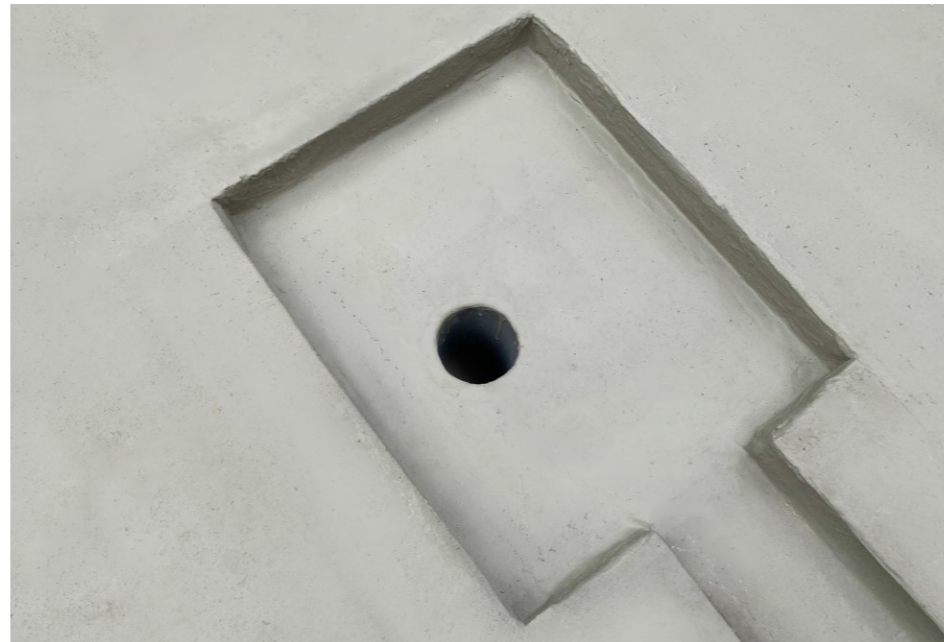


# The solution

Triflex also proposed Triflex FlexSealer for the new canopy fixings. The canopy support posts were mechanically fixed to the deck, and the pourable sealant Triflex FlexSealer applied within a former over the base plates. The cold mix and pour kit is specially designed to waterproof and seal surface mounted details and penetrations in under an hour.

The Triflex ProTerra PMMA waterproofing and surfacing system was installed across all penetrations and drainage channels to deliver a homogenous and seamless waterproofing membrane. Rainproof in just 30 minutes and rapidly curing even in winter temperatures, the liquid applied waterproofing membrane helped to keep the project timescales as short as possible, enabling use of the space soon into the new school year. The Triflex waterproofing solutions are cold applied, negating any fire risk during works to the school terrace, meaning that rooms below the terrace could remain in use during the installation phase.

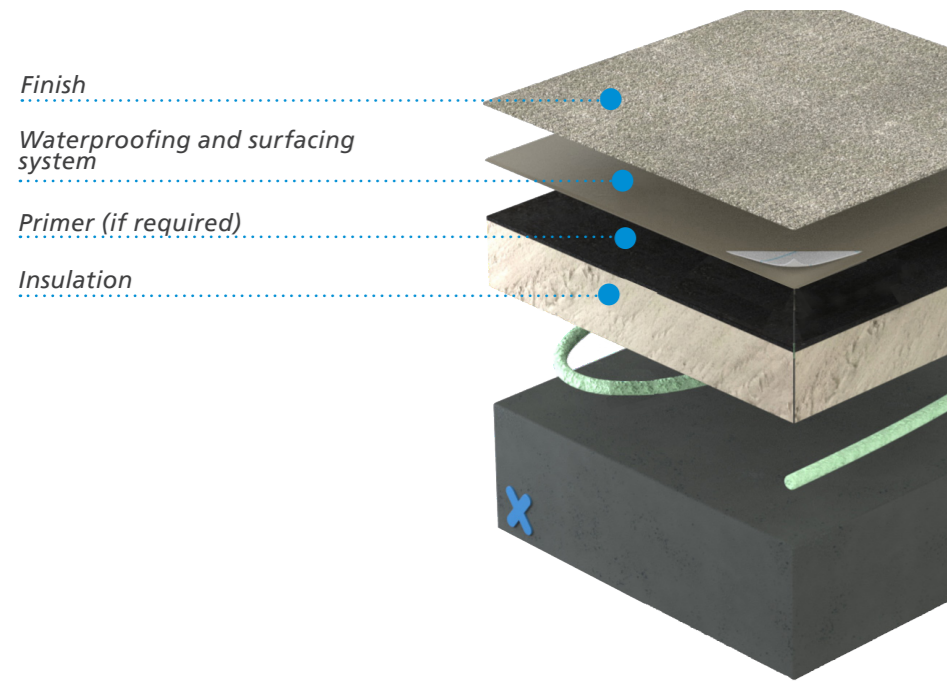
The school's outdoor learning space is now a safe and inviting environment, fitting with the school's Love To Learn ethos.



System benefits

## Triflex ProTerra<sup>®</sup> Insulated

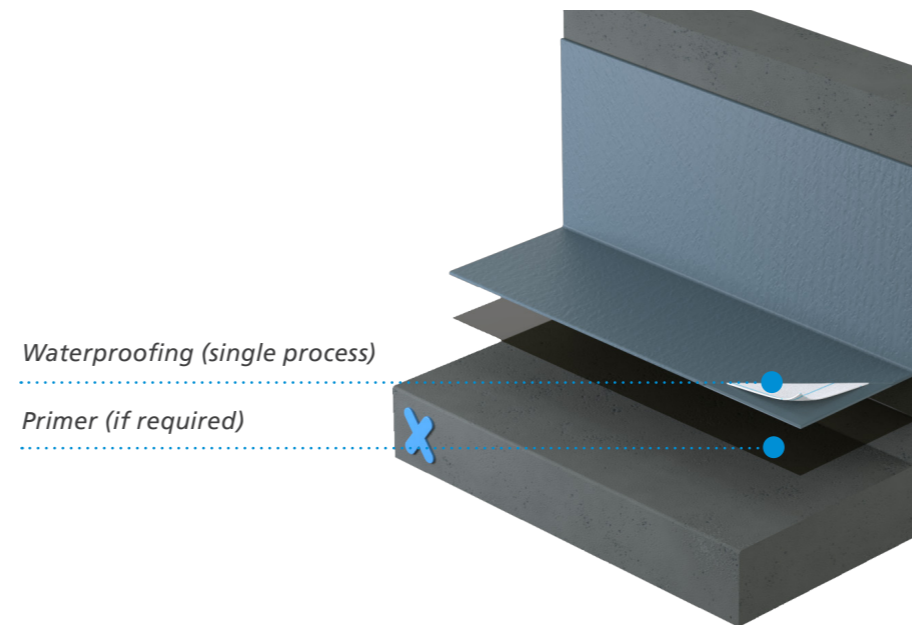
- Totally cold applied, with no risk from hot works
- Maximises insulation values, reducing heat loss and increasing energy efficiency
- Unaffected by ponding water, resistant to chlorides and carbon dioxide ingress
- Exceptionally rapid curing / rainproof times, even at low temperatures
- Fully reinforced waterproofing technology
- Available in four surface finishes
- Simple, single process waterproofing application
- Solvent, isocyanate and plasticiser free



System benefits

## Triflex ProDetail<sup>®</sup>

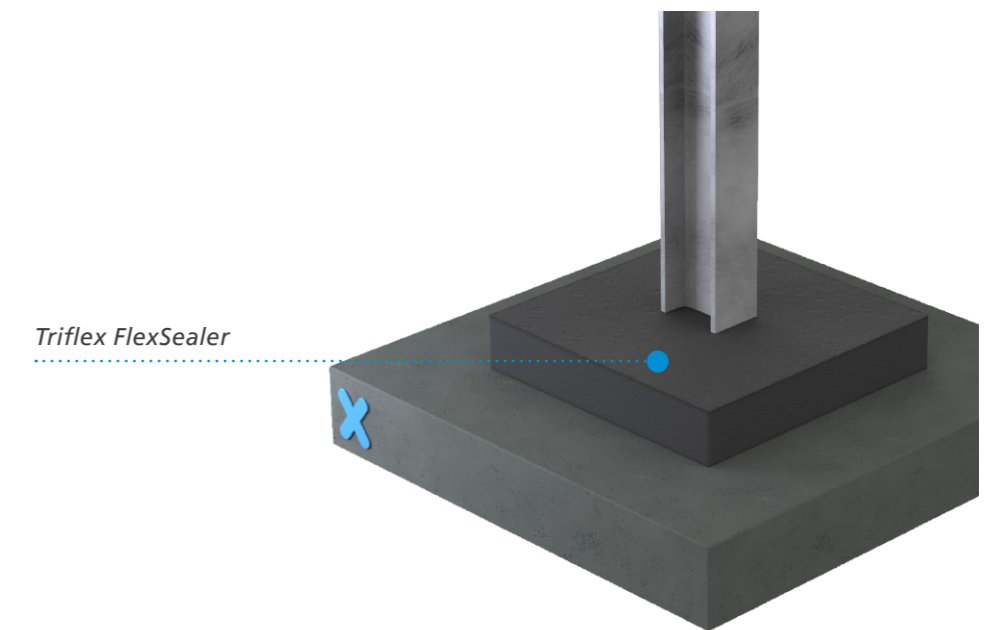
- Waterproof down to the smallest detail
- Compatible with virtually all substrates including asphalt
- Cold applied, fast curing with rapid installation
- Simple, single process waterproofing application
- Rapid curing system - even at low temperatures
- Fully reinforced technology
- Certified to the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



System benefits

## Triflex FlexSealer

- Totally cold applied, with no risk from hot works
- Fast curing with rapid installation
- Can be applied at 0°C - 35°C
- Easy to mix by stirring stick or paddle mixer
- Flows around complex details
- Self-levelling
- Tough and durable with excellent adhesion
- Solvent and isocyanate free





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, 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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