



CASE
STUDY

Triflex

WARM ROOF
SWANLEY, LONDON

ORCHARDS ACADEMY

Area
1,100m²

Systems
Triflex ProTect[®] warm roof system

Consultant
Ridge and Partners LLP

Contractor
Makers Construction Ltd.

The challenge

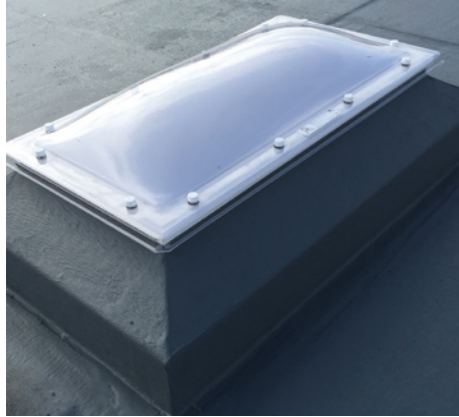
Orchards Academy in Swanley, London, is one of several schools that has recently invested in refurbishing their roofs with a Triflex cold liquid applied waterproofing system. Educating boys and girls from year 7 through to post 16, Orchards Academy prides itself on the high level of education and facilities that they provide.

The school is a three-storey structure that was built in the 1960's. It is a U-shaped building that features low level roof lights and ballasted photovoltaic panels. The building had been suffering from water ingress from the roof but during the initial inspection the roof appeared to be in a reasonable condition. However, any surface defects that may have been present were masked by the existing finish, which contained limestone chippings. The chippings had developed a considerable amount of moss and vegetation over time, and held vast amounts of water.

In addition to the scope of work the Multi Academy Trust operating Orchards Academy outlined that they required a solution that did not require the use of hot works, as they felt this posed too much of a risk to the building, students and staff. Lastly the thermal performance of the roofs also needed to be upgraded as the minimum requirements of Part L2B of the Building Regulations were not being met.

After carrying out a free on-site survey, core samples were taken to identify the underlying build up, allowing the Triflex Technical Team to provide the most accurate specification.





The solution

Based on the on-site survey and testing results, it was determined that the best solution would be to install a Triflex ProTect warm roof system. This system was specified following calculations done to determine the thickness of the insulation material, ensuring the necessary U-value would be achieved. The Triflex ProTect warm roof system allowed the building to meet the requirements of Part L2B of the building regulations and provides a solution that poses no risks from hot works, as it's totally cold applied.

Prior to installation it was specified that our Authorised Contractor, Makers Construction Ltd. should remove the limestone chippings and vegetation before installing the waterproofing system, in order for a strong bond to be made between the surfaces. Following this removal, it was apparent that the chipping finish had proven to be detrimental to the roof by denying water to flow towards the drainage channels. This had led to cracking and water ingress to the asphalt below.

Fortunately, Triflex solutions are hydrolysis resistant, so if there were to be issues with standing or ponding water in future it would have no adverse effect on the waterproofing. Triflex ProDetail was used to waterproof various details, including upstands, the ballasted photovoltaic panels and the new roof lights which were installed at the same time.

The combination of excellent time management from Makers Construction Ltd. and the exceptionally fast cure times of the PMMA (PolyMethyl MethAcrylate) resin-based system Triflex ProTect, meant that works were carried out efficiently and effectively, during school time while meeting all deadlines.



Triflex

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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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
- Ideal for use in a warm roof build-up
- Hydrolysis (standing and ponding water) resistant

