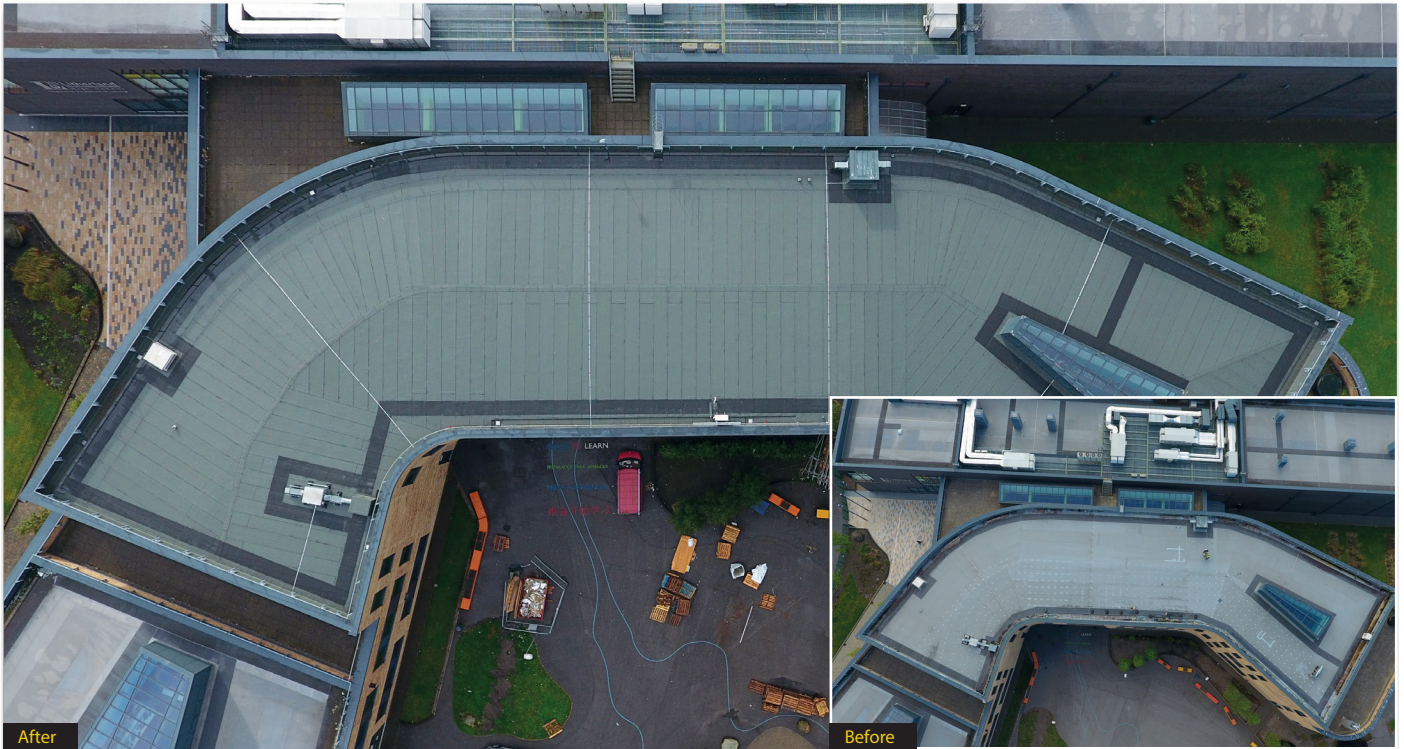




### New build roof, Litherland High School, Liverpool



#### Project Brief

With the major failure of a new school roof due to high winds uplifting the roof system away from the metal structural deck, Litherland High School in Liverpool was in need of a more suitable and robust roofing system, one that would offer long term waterproofing protection against future high winds. Due to the metal fixings piercing through all layers of the built-up roof system including the deck, water had ingressed as far as the metal deck troughs and was then allowed to enter the building through the fixing holes in the deck like a shower. The new system had to be installed without the need to be mechanically fastened into the structural metal deck below.

Working with the Approved Contractor, Proteus Waterproofing supplied 2600m<sup>2</sup> of its high-performance Proteus Pro-Felt® Built-Up roof system, a fully bonded solution which required no mechanical fixing and would provide a long-term solution and a safe, efficient application. Proteus Pro-System® was put forward as a solution for awkward detailing such as handrail fixing points.

#### Key Requirements: High performance waterproofing

The new system had to be installed without the need of mechanical fixings and to be able to resist future high wind uplift. Proteus Pro-Felt® is engineered with the most advanced technology in bituminous membranes available. It has class-leading SBS content which allows the flexible membrane to move with the building and ensure long term durability and performance. The high-performance Proteus Pro-

Felt® built-up roof system incorporated a cold applied self-adhesive vapour barrier, Pro-Vapour SA, and 120mm Proteus Pro-Therm insulation bonded with Pro-Bond cold applied adhesive.

Finally, this was waterproofed with Proteus Pro-SA-Heat activated underlay, a self-adhesive underlay and finished with the Pro-Felt® mineral cap sheet. For the internal gutters, a Pro-Felt® Endura root resistant mineral cap sheet was installed as the waterproofing finish to ensure no vegetation growth could fix roots to the system and over time lift felt laps.

#### Key Requirements: Quality control

Due to the complex nature of the works, Proteus Waterproofing worked in close partnership with its Approved Contractor to successfully deliver the project to a very high standard. Proteus Waterproofing carried out a wind uplift calculation to ensure there would be no future uplift problems and an Insulation U-Value Calculation to ensure the system met the insulation requirements of the client.

#### Key Requirement: Long term performance

Proteus Pro-Felt® waterproofing system offers 10, 15, 20 & 25-year durability options which are also available with independent insurance backed guarantees. A range of roofing system solutions are available including inverted roofs, green roofs and podium decks.