



Proteus Waterproofing

Case Study: Proteus Pro-Felt®

Roof Refurbishment, Mr Clutch, Hemel Hempstead



Project Brief:

A busy car repair garage in Hemel Hempstead had experienced water leaks into the building below for several years. **Proteus Waterproofing** carried out a survey on the 800m² roof. Core samples from the high-level roof over the garage, working areas and offices which showed a metal deck, no vapour barrier, fibreboard and an aged three layer felt waterproofing system. It could also be seen visually that areas of the previous waterproofing had collapsed into the troughs of the metal deck after water ingress had decomposed the fibreboard beneath the felt. The lower roofs over the storerooms showed a concrete deck, screed and asphalt waterproofing.

Key Requirements: High Performance Waterproofing

A **Proteus Pro-Felt® Ultima Fireguard** built up felt system was chosen which consisted of **Pro-Prime® SA**, a self-adhesive primer that was first applied, followed by **Pro-Vapour Control**, a metal lined self-adhesive vapour barrier. **Proteus Pro-Therm** 130mm insulation board bonded in **Pro-Bond Adhesive**. **Proteus Pro-Felt® Self Adhesive** heat activated underlay was then applied to the insulation boards. Finally **Proteus Pro-Felt® Ultima Fireguard** mineral capsheet was installed, which is BBA certified for 30 years and fire certificated as BroofT4 to complete the waterproofing membrane system.

Key Requirements: Quality Control

Due to the collapse of the existing felt and fibreboard, the only option was to strip the roof back to the metal deck. These works needed to be carried out while the garage continued to trade and operate, therefore noise needed to be kept to a minimum and preventing further water ingress from entering the building. A further challenge was to ensure a **Safe2Torch** installation was carried out. This was due to the wide use and storage of petroleum and other oil based combustible products stored at the site, therefore safety was paramount. **Proteus Waterproofing** worked with Licensed Contractor to successfully deliver the project to a high standard.

Key Requirements: Long Term Performance

Proteus Pro-Felt® Ultima Plus is a High Performance multi-layer bituminous membrane system, tested to perform in extreme temperatures and weather conditions. This membrane is impervious to water and will achieve a weather-tight roof. It has class leading modified bitumen content which allows the flexible membrane to move with the building and ensure long term durability and performance, which is certified by the BBA to be in excess of 30 years. All **Proteus Waterproofing** specifications promote fire safe installation methods conforming to the industry lead **Safe2Torch** guidelines.

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