



Case Study

Triton Supplied:

Triton supplied TT Super Admix to produce a total of 900m³ of watertight concrete



The first of three pours in the construction of the watertight concrete floor slab

TRITON SUPPLIES WATERTIGHT CONCRETE SYSTEM FOR GOLDSMITHS, UNIVERSITY OF LONDON

Triton's TT Super Admix has been used to produce 900m³ of watertight concrete, specified for the construction of the basement at the new DMC Building at Goldsmiths, University of London.

The TT Super Admix was added to the concrete during the batching process at a rate of 4.1kg/m³. The concrete mix design was a 20% PFA blend, minimum cement content 350kg/m³, with a maximum water: cement ratio of 0.5 and an S3 workability (130mm slump). The concrete was supplied by Hansons Concrete and is being used in the construction of the concrete capping beam to the top of the piles, the reinforced concrete liner walls (150mm – 200mm) and the reinforced concrete floor slab (300mm). All construction joints to the capping beam, wall capping beam, wall/floor and floor/floor joints are to be waterproofed with Triton's TT Swellmastic and TT Waterstop forming a completely watertight concrete system.



A completely watertight concrete system to floor and walls

The active chemicals in Triton TT Super Admix react with fresh concrete to generate a non-soluble crystalline formation which seals the concrete itself against the penetration of water or liquid, protecting it from the deterioration effect of harsh environmental conditions.

Triton TT Waterstop is a pre-formed waterstop available in a ready to use roll. When fully encapsulated by poured concrete, the expansive forces form a seal against concrete surfaces to resist hydrostatic pressure and to stop water from entering the sub-structures. Triton TT Waterstop returns to its original size if the concrete is completely dry but re-expands to seal the potential leaking joints when water or moisture is re-introduced.

Triton Swell Mastic is a gun applied, one-component hydro-reactive expansion sealant for waterproofing joints in concrete. It will swell up to 100% when in contact with water to create a durable waterstop with long lasting adhesive and hydro-swelling properties.

Monitored by Triton

During the construction of the watertight concrete system, the batching, placement, construction joint detail and post pour concrete was inspected and monitored by Triton for the purpose of quality assurance and warranty.

A twin waterproofing approach was proposed by contractors, City Basements (Toureen Mangan), and Triton and accepted by the architects, Stride Treglown of Bristol and main contractor, Willmott Dixon Construction. Therefore the Triton watertight concrete system – the primary waterproofing method – will be backed up by a Platon internal cavity drain system to be installed when the concrete construction is complete.

The basement will house two lecture theatres, TV and photographic studios and associated areas. The basement is 4.5m deep and extends to the complete 1800m² footprint of the new, two storey building above.

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The 300ml floor slab was poured in three stages