



Case Study

OCTOBER 2010

Triton supplied:

TT Super Admix (to 200m³ concrete), TT Waterstop (200 linear metres), TT Swellseal Mastic (Platon Membranes as phase 2 waterproofing)



Sub basement slab preparation for home cinema area

TT SUPER SEALS SWISS COTTAGE BASEMENT

A reinforced two storey concrete basement is currently being constructed in London by Poundbourne Construction Ltd. Part of a luxury detached home development, the upper level will accommodate a home cinema, while a swimming pool, sauna and gymnasium will be installed below.

Although the structure was designed to offer primary resistance to ground water, the specification of TT Super Admix to the concrete mix and TT Swellseal Mastic and TT Waterstop to approximately 200 linear metres of construction joints and interfaces achieved a Type B waterproofing system (as defined in BS 8102 2009). The subsequent addition of a Platon cavity drained membrane system applied internally as phase 2 waterproofing, will help to achieve a Grade 3 habitable living environment as defined in the same standard.



Pre-formed recess in floor slab to accept TT Waterstop

Triton's TT Super Admix was added to the mix at a ratio of 4.1Kg per m³ of concrete with a minimum cement content of 350Kg per m³ of concrete (C35 type concrete). Approximately 200m³ of concrete was supplied to the site by London Concrete. TT Waterstop was set in to pre-formed recesses within all construction joints/interfaces and subsequently filled with Triton's TT Swellseal Mastic to prevent ground water entering the structure at these most vulnerable points.

The active chemicals in Triton TT Super Admix react with free lime within fresh concrete to generate a non-soluble crystalline formation which seals the concrete against the penetration of water or liquid, protecting it and the steelwork within, from deterioration and carbonisation.

Triton TT Waterstop is a pre-formed waterstop/waterbar supplied in a ready to use roll. When fully encapsulated by poured concrete, the expansive forces form a seal against the concrete surfaces to resist hydrostatic pressure and to stop water from entering the sub-structures. It is capable of swelling up to 700% of its original size! TT Waterstop returns to its original size if the concrete is completely dry but re-expands to seal potential leaking joints when water or moisture is re-introduced.

Monitored by Triton

During the construction of the watertight concrete system, the batching, placement, construction joint detail and the post pouring of concrete was inspected and monitored by Triton for quality control purposes and to meet Triton's warranty requirements.

Sourcing all the components for a watertight concrete system from the same supplier offers significant benefits to all parties, most notably it avoids the split responsibility and compatibility issues often encountered when waterproofing system components are sourced from multiple suppliers.

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Concrete supplied by: London Concrete

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Sealed construction joint



Sealed construction joint



Service entry sealed with TT Waterstop