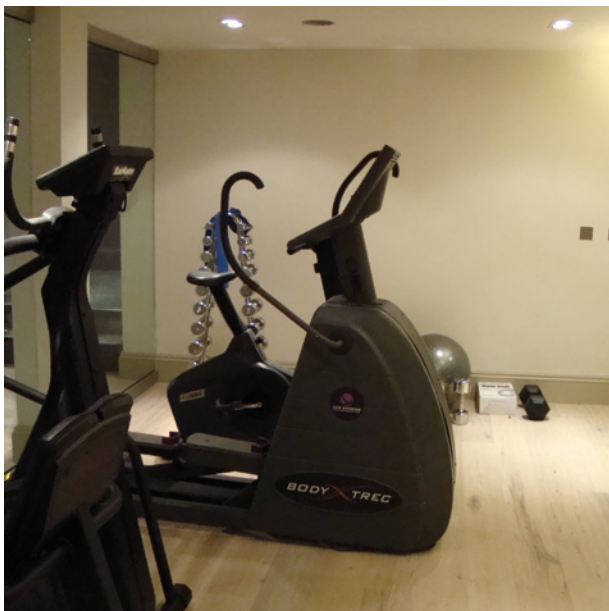
JANUARY 2010

Basement Development Case Study

PLATON MEMBRANES KEEP HIGH SPEC HOME WATERTIGHT

Platon cavity drain membranes and other Triton waterproofing systems have been used in the construction of an extended basement and underground swimming pool at a substantial 1920's residential property in South London.

In view of the intended use of the extended basement as a very high specification home cinema, snooker room and gymnasium, it was of paramount importance that the area was effectively waterproofed. A Triton approved installer was therefore contracted to install a BBA approved sealed system of cavity drain membranes to the basement. The system comprised Platon Multi membrane which was fixed to the walls using special plugs and sealing materials, heavy duty Platon P20 membrane which was loose laid on the floor and associated pumps and drainage components. Due to the size of the floor area (approximately 150m² metres), three 800mm x 800mm sumps were constructed from cast concrete in various locations to house the submersible pumps. The floor slab was then cast with falls to gully drains interconnected to carry any water away to the sumps.



Part of the basement has been fitted out as a gymnasium

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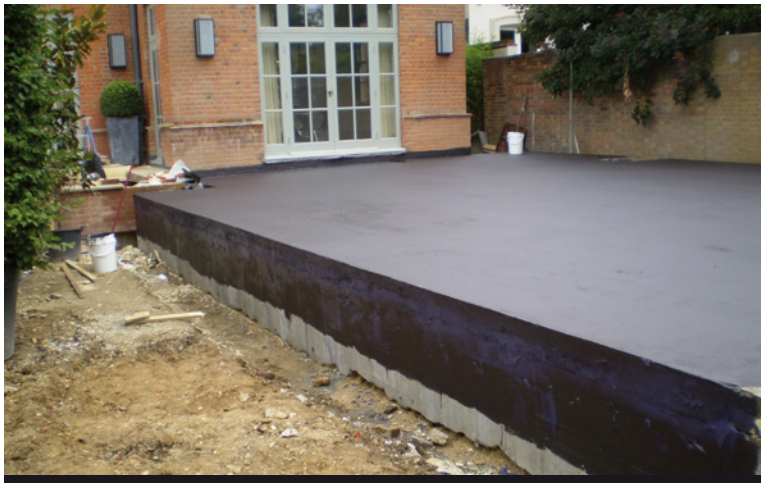
A sealed cavity drain membrane system works on the principle of allowing water to continue to penetrate the structure, but controls it in the air gap and diverts it to a suitable drainage point.

Pressure does not therefore build up against the internal construction and the air gap behind the membrane allows the structure to breathe. Both Platon P20 and Multi membranes are impermeable to water, gas and water vapour. The deep stud design of Platon P20 is designed to resist blockages caused by lime deposits.

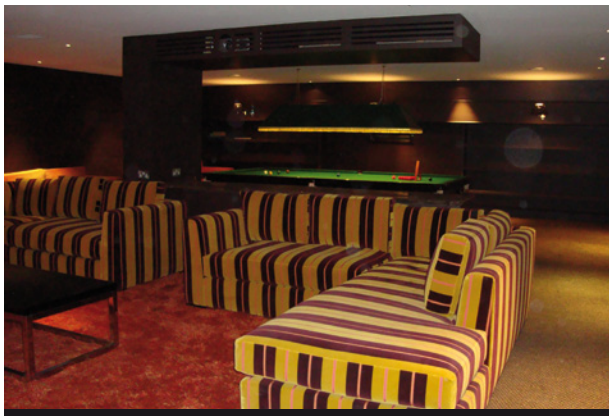
After installation of Platon Multi, the walls of the basement were dry lined. On the floor, 150mm insulation was laid over the Platon P20 membrane before the installation of an underfloor heating system throughout the basement (apart from the area around the swimming pool). The floor was then screeded.

Triton's TT Vapour Membrane and Platon Double Drain was used to waterproof the roof of the new, two storey deep swimming pool, which extends under a new landscaped patio. Closed cell insulation was installed over the steel beam and concrete plank roof before applying a 75mm screed with a fall to drainage and two coats of Triton TT Vapour Membrane. (This product is designed to be used as an alternative to sheet waterproofing membranes in new construction but can also be retro-applied as a waterproof or gas-proof membrane.) The TT Vapour Membrane was extended down over the edge of the roof construction to waterproof the construction joints, with reinforced glass fibre mesh sandwiched between the two coats to take up any movement. Platon Double Drain membrane was then laid over the cured TT Vapour Membrane and linked to suitable land drains, before laying a mortar bed and paving and planting the surface.



Two coats of TTVM were applied to the swimming pool roof

The existing basement after installation of cavity drain membranes



Underfloor heating was installed over the cavity drain membrane system throughout the basement

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