



NEW BUILD MEWS PROPERTIES

A range of waterproofing systems were installed in this West London new build project comprising two adjoining, high spec mews properties. This was a compact site requiring a complex waterproofing design for a multi-level basement comprising lift pits and two swimming pools recessed into the lower basement level. In view of the value of the properties and the variable water table, a combination of Types A, B and C waterproofing systems was specified to produce a robust solution, conforming to the Grade 3 basement category as defined in BS 8102:2009, that would inhibit any potential water ingress.

Each property will benefit from a two storey basement, the lower basement in each housing a swimming pool, media room, gym and plant room.

The basements were constructed using watertight concrete, with an external bentonite system installed as the first line of defence against moisture ingress, prior to the placement of the concrete. A continuous and linked internal waterproofing system was then installed using cavity drain membranes and liquid/cementitious applied materials.

Cavity drain membranes were installed to all earth retaining perimeter walls and the lower basement slab. The system is designed to drain down from upper to lower level via discharge outlets from the banded perimeter drainage channel at the upper level. At the lower level a recessed channel accommodates a continuous drainage conduit around the perimeter of both properties and is waterproofed with liquid applied waterproofer. Rodding eyes were installed at 10LM internals and at every change of direction to facilitate maintenance of the drainage system. The system drains to sumps in each property each fitted with twin pump systems.

The swimming pools, plant rooms, service trenches and lift pits are recessed into the lower basement level forming in effect a third basement level. Both pools and all walls at this level are waterproofed using using an elastomeric cementitious slurry system to accommodate changes in pressure caused by emptying and filling the pools and the noise and vibration from the lifts. A cavity drained system cannot be punctured so this system also facilitates the resin fixing of heavy plant to the walls in the plant rooms and service trenches.

The perimeter drainage channel at floor level of the lower basement continues at the same level around the top of the swimming pool liner walls and discharges behind the walls of the trenches and plant rooms to either of the two sumps recessed in each plant room floor. 20mm cavity drain membrane continues the sealed cavity drained system across the floors of the plant room and service trenches.

The banded upstands at floor wall junctions, and other wall/floor and wall/



8mm cavity drain membrane to wall at upper basement level with perimeter drainage channel sealed with liquid applied waterproofer and corner strip, showing access point via 40mm pipe and 90° bend.



Lower basement level showing 8mm cavity drain membrane on wall to soffit detail sealed with liquid applied waterproofer. 40mm discharge outlets drain down from the level above and angle back towards perimeter liner wall.



Upper basement level showing 8mm cavity drain membrane to walls and banded perimeter drainage channel.



soffit details are sealed with liquid applied waterproofer and corner strip to create a complete and continuous internal waterproofing system across all substrates and levels of the basement.

To minimise any compatibility issues, where possible, all products were sourced from a single source of supply and installed by appropriately trained operatives or manufacturers' approved installers.



Service trench waterproofed with a cementitious slurry system and 20mm cavity drain membrane to floor. Lower basement level drainage channel runs around upstand of trench liner wall and discharges behind wall down to perimeter drainage channel set in trench floor slab.



Completed trench looking up to suspended steel floor to lower level basement.



Bunded wall to service trench edge detail.



Swimming pool recessed into lower basement level floor. Perimeter drainage channel at floor level runs around top of pool liner wall. Pool walls and floors are waterproofed with an elastomeric cementitious slurry system and fillet sealing detail at wall/floor joints.

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