

CASE STUDY

The Shard, London Bridge

STRUCTURAL WATERPROOFING

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Waterproofing the existing London bridge underground link with Newton System 500

Project Details

The existing tunnel network connecting London Bridge Underground to "The Shard" needed to be upgraded to house facilities for the Transport for London bus drivers as a part of the overall London Bridge Quarter development. The main contractor Mace, commissioned the services of Newton and Stonehouse Basement to design and install the Newton System 500 internal drained cavity system to upgrade the existing tunnels to a Grade 3 Habitable environment in accordance with BS8102: 2009.

Methodology

Stonehouse Basements design was to install the BBA certified [508 Cavity Drain Membrane](#) to the vaulted areas. The 508 has an integral key for direct/plaster applications and is mechanically fixed with [Newton NuSeal Plugs](#) with Newton WaterSeal Rope wrapped around the neck of the plug to form a waterproof seal. The meshed membrane application required strategic mechanical fixing to hold the weight of the applied finish.

Once the membrane was installed to the walls, timber battens were applied into the heads of the NuSeal plugs in preparation for receiving plasterboard. Fixing into the head of the NuSeal Plugs meant that the membrane system was not compromised as the NuSeal plugs act as a waterproof rawl plug. [Newton Basedrain](#) was installed at the wall floor junction within a margin formed in the concrete slab.

[Newton 101F](#) slurry was applied to the rebate and also out onto the slab to prevent moisture vapour transgressing out across the slab. As this project was at first floor level any ingress of water was managed into the [Newton Basedrain](#) conduit and removed from the internal space to lower level gravity drainage.

Result

[The Type C drained cavity](#) protection option meant no messy preparation works to the existing vaults and that any water ingress could be easily removed without the need for a [sump and pump](#) option. As the project was very time sensitive, there was no need to extensive drying out times as required with other [Type A](#) tanking alternatives. In addition, Mace the main contractor could get the benefits of an insured backed guarantee by using a [Newton Basement](#).

Benefits

- The BBA accredited Newton System was applied with minimal surface preparation without expensive preparation works which have been required with an applied wet tanking system
- The client could delegate the whole project to Stonehouse Basement with peace of mind of an insured backed guarantee for the works.



The project was part of the major London Bridge Quarter development



Application of BBA certified Newton 508 Cavity Drain Membrane to the vaulted areas



WaterSeal Rope was wrapped around the neck of the plugs to form a waterproof seal

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Featured Products

NEWTON SYSTEM 500

Maintainable Cavity Drain System Comprising Waterproof Drainage and Pumps.

The professional's "waterproofing system of choice", Newton System 500 is an internally applied waterproofing system based upon Newton's extensive range of cavity drain membranes, drainage conduits and sophisticated pumping and control systems. It is a maintainable system, so complies with BS8102 Code of Practice for Protection of Structures Against Water from the Ground.

Newton recommends that our structural waterproofing systems are installed by one of our Nationwide Network of Newton Specialist Basement Contractors (NSBC)

NSBCs have been trained by Newton and can offer full professional indemnity on design and insured backed



Newton System 500

	
Waterproof Membranes	Drainage
	
Pumping System	Water Pumps

Cavity Drain Waterproofing



The Newton System 508 Cavity Drain Membrane applied to upgrade the existing tunnels in the London Underground station using Newton Nuseal Plugs and Newton Waterseal Rope