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## Case Study BASEMENT WATERPROOFING - CHISWICK

### RUSSIAN ORTHODOX CHURCH

**New Build Waterproofing Project: Failed tanking to prestigious project solved with Newton Waterproofing Systems.**

#### History

This prestigious new Church, built in reinforced concrete, was only two years old when the original tanked waterproofing system failed resulting in large areas of standing water to the lower ground floor area of the church. Extensive damage occurred to internal fixtures and fittings rendering the building unfit to use.

#### Methodology

As is often the case, Newton System 500 was specified as the remedial system to put right the failed tanking. Because the Church is constructed in structural concrete, it was decided to sit the Newton Basedrain perimeter drainage channel above the concrete raft rather than form a recess within it. Newton 500 and Newton 500 Lath was fitted to all retaining walls to ensure that any water seepage at the walls would be diverted to the Basedrain, and because the consistency of the concrete raft was in doubt, Newton 520 flooring membrane was laid to the floor to divert any water that may arrive through inconsistencies within the raft to the Newton Basedrain. Because the Newton 520 was laid on the raft adjacent to the Basedrain it cannot be used a vapour / DPM flooring membrane also, as would be the case if the floor membrane was laid above the top of the Basedrain. The Newton 520 was in fact a 'lost' drainage layer whose sole purpose is to prevent local points of water pressure occurring if, as was suspected, the raft was in such a poor condition that water should pass through non-designed cracks within the concrete.

A 'closed cell' insulation was laid above the Newton 520 and Newton Slimline Flooring was laid above the insulation and sealed to the Newton 500 on the walls to form the vapour barrier / DPM. The floor was finished with a sand/cement screed to the original finished floor level, and the walls were finished with dry-lining over the Newton 500 and a sand & cement render to the Newton 500 Lath. All wall surfaces were then skimmed. Also interesting is the fact that virtually all of Newton product range was used on this one project.

The cavity drain membrane system was used to control the water ingress from the many points of leakage in the structure rather than try to 'plug' each incidence of leakage or to line the property with a tanking membrane. The design team felt that the drained system had a much better chance of success

The waterproofing design and installation was carried out with skill and precision by Newton Specialist Basement Contractor - Advanced Preservations.

#### Result

The church was able to retain its intricate features with Newton meshed membranes being installed to the intricate windows reveals, which once completed by the Russian craftsmen, could not be distinguished from the original detailing pre-flood. The combination of products used ensured that all water ingress was successfully moved to the pumping system for removal out of the property. This very specific design overcame the very specific problems afflicting this property.

#### The Benefits

The contract was completed in less than 4 weeks and the client now benefits from a system which required minimal surface preparation and could be installed with speed and confidence. In addition the client has the peace of mind of a meaningful insured backed guarantee from a top quality waterproofing contractor.

#### NSBC Contractor - Advanced Preservations

#### In Picture



Russian Orthodox Church, Chiswick, West London.



All Newton membrane products were installed within this complex waterproofing project.



Newton Slimline Flooring installed over damp RC slab.



Moisture sensitive flooring installed over Slimline Floor membrane.