



Burnside Villa, Glasgow

New-Build Concrete Basement Waterproofing

The Project

Following the demolition of an existing property, the site was excavated in order to construct Burnside Villa, a significant residential project in an affluent area of Glasgow.

The new, four-storey Villa has a basement area of over 240m², and considering the high-value project, [Wise Basement Systems](#) were called in at an early stage to assist in designing the waterproofing solution.

The Solution

Considering the client's plan to use the new basement as a habitable area, including their own below-ground cinema, Wise proposed that all three 'Types' of waterproofing be installed for complete protection.

Externally, Newton's self-healing Type A [403 HydroBond](#) was fixed to the formwork before the concrete was poured. The Type A waterproofing was completed using the liquid rubber membrane [109-LM](#) alongside [410 GeoDrain](#) as a drainage layer to protect the waterproofing.

The Type B waterproofing was achieved with the BDA approved, hydrophilic [315 Polymer-Waterbar](#) within the construction joints.

The waterproofing solution was finished off with an internal Type C [Newton CDM System](#). Newton's [508](#) and [520](#) membranes were applied to the walls and floors respectively, with [Fibran XPS 500-C](#) as an insulation spacer beneath the floor membrane. [Basedrain](#) drainage channels directed captured water to a [Titan-Pro](#) sump chamber containing two [CP400](#) clean water pumps. The whole system is backed-up by a [Victron Inverter](#), [Pump Controller](#) and [Dialer](#).

The Result

The importance of the waterproofing at this luxury property is emphasised by the numerous systems that were installed, giving the client comprehensive protection that is also BS 8102:2009 compliant.



Extensive excavations were made for the new build.



403 HydroBond provided protection beneath the slab.



"Wise Basement Systems carried out the waterproofing to this new build concrete basement and were extremely professional in their work.

I would recommend Wise and the Newton Waterproofing products they used to any company or client."

Richard Lyons, Director - AR Builders

The Products

HYDROBOND SYSTEM

The Newton HydroBond System provides a complete and continuous external waterproof envelope to below-ground structures, in this case by using Newton 109-LM, 403 HydroBond and 410 GeoDrain.

403 HYDROBOND

A high-performance, self-healing sheet membrane, also available as a gas-barrier, that is an integral part of the Newton HydroBond System.

HYDROTANK SYSTEM

The Newton HydroTank System ensures that the structure is the primary resistance to water ingress, in this case by utilising the hydrophilic Newton 315 Polymer-Waterbar in the concrete construction joints.

CDM SYSTEM

The Newton CDM System employs cavity drainage membranes, drainage channels, insulation, sumps and pumps, backup systems and ancillaries to provide the most failsafe form of Type C waterproofing.

FIBRAN XPS 500-C

A closed-cell, 50mm insulation board that forms a key component of the Newton CDM System, acting as a spacer for the drainage channels to operate effectively without having to compromise the concrete raft/slab.

TITAN-PRO

This packaged sump system is designed specifically for use with the Newton CDM System, with a unique shape and adjustable neck meaning that connections in and out can always be made



Newton 109-LM and 410 GeoDrain protect the external walls.



Type C Newton CDM System was installed internally.



Internal finishes were safely installed in front of the CDM System.

Newton Specialist Basement Contractors

Newton recommends that our systems are installed by one of our nationwide network of Newton Specialist Basement Contractors (NSBCs). Trained by Newton, NSBCs offer a full guarantee on the design and installation, and can act as Waterproofing Design Specialists.



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