



Waterproofing the London School of Economics

The Marshall Building, Lincoln's Inn Fields, London

The Project

In April 2016, the world-renowned [London School of Economics](#) announced that [Grafton Architects](#) were to design their next major project. The Marshall Building at 44 Lincoln's Inn Fields includes an extensive two-storey, mixed-use basement that will house plant areas, squash courts, changing facilities and a sports hall, covering a total of over 2,250m² of floorspace.

Newton Specialist Contractor [CCL](#) were appointed to design, supply and install the waterproofing by principal contractor [Mace Group](#) in late 2019.

The Solution

To provide a completely dry, guaranteed solution, CCL recommended the [Newton CDM System](#). Otherwise known as Type C waterproofing, the CDM System is the safest and most reliable form of waterproofing.

Prior to installation, CCL applied [Newton 906 Lime Inhibitor](#) to the new slab to prevent free lime from the concrete from affecting the drainage membranes. The Type A liquid waterproofing membrane [Newton 103-S](#) was also applied internally to many of the concrete surfaces as a barrier to water.

With preparations complete, over 2,250m² of [Newton 520 eco](#) membrane was installed to the floor and over 570m² of [Newton 508](#) membrane installed to the walls to create the Newton CDM System. A drainage system of [Newton Basedrain](#) channels also directs any water captured by the membranes to the point of discharge, and the whole system was sealed with [Newton OverTape](#).

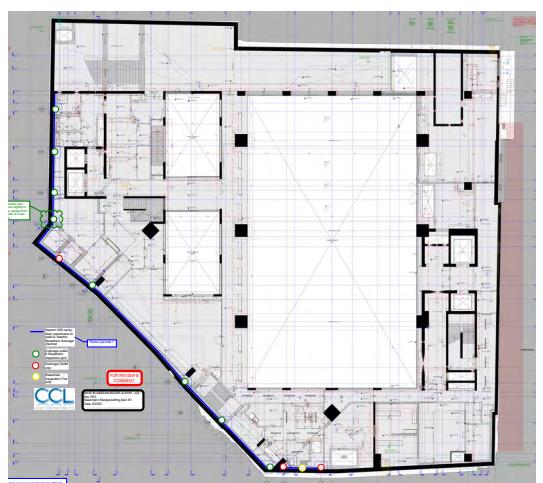
The Result

Despite requiring dedicated delivery slots, and working to an extremely tight program of work, CCL were praised on the quality and speed of their installation, which was completed well within the time limit.

The [Newton recycling service](#) was also a great success, recycling 115 kg of HDPE waste and therefore preventing over 132 kg of CO₂ emissions.



Newton 520 eco installed across one of the large floors.



The extensive, new-build basement area.



"The unique closed loop recycling service provided by Newton has bought real benefits to the project.

It has helped us reduce our construction waste and supported our Time to Act campaign to reduce single use plastic waste across construction, all with no impact on site activities."

Alice Ashpitel, Sustainability Manager
Mace Group



CCL also utilised the unique Newton recycling service.

The Products

103-S

A liquid-applied, Type A waterproofing membrane with high adhesion that is capable of resisting extremely high water pressure, and can be quickly applied in just one coat.

CDM SYSTEM

The most reliable waterproofing solution for any space below ground, the Newton CDM System combines decades of experience with the highest quality, BBA certified membranes from [Newton System 500](#), bespoke sump and pump configurations, back-up systems, telemetry and ancillaries.

508

BBA certified, high quality cavity drain membranes as part of the CDM System, manufactured from 100% recycled HDPE.

520 eco

BBA certified, 100% recycled, 20mm cavity drain membrane that is ideal for basement floors as part of the Newton CDM System.

MULTIPLUGS & ANCILLARIES

A range of products that are critically important to the installation of the Newton CDM System, including plugs, tapes and seals.

BASEDRAIN

A drainage system that receives and drains water from the cavity drain membranes and directs it to the point of discharge.

906 LIME INHIBITOR

Applied to concrete surfaces prior to the installation of a Newton CDM System to prevent the 'leaching' of free lime from the concrete, which could block the cavity drain membranes.



The massive basement spanned across two new storeys.



An artists' impression of the Marshall Building's new Great Hall

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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