



## WATERPROOFING A BASEMENT GARAGE & CAR LIFT

### Tanking a New-Build Basement Garage, Gym and Cinema, London

#### DEMOLITION & REBUILDING

Standing on a sizable piece of land in a prosperous area of Chelsfield in Southeast London, a dilapidated bungalow was more than ready to be demolished and transformed into a 1,300 cubic metre excavation!

The clients of this particular project were looking to build their own spectacular four-storey Georgian-style property on the land. This included a requirement for sheltered parking, however with planning restrictions in place, some creative thinking was needed to accommodate this in the design.

#### PLANNING RESTRICTIONS

Whilst the footprint of the building was already large enough to accommodate a sizeable 260m<sup>2</sup> basement, planning restrictions prohibited how far back the property could sit.

With so much basement space available, the design therefore incorporated a car lift and underground garage into the above-ground and below-ground specification. But how would specialist contractor [MJ Rooney](#) achieve this alongside a proposed basement gym, sauna, shower room and cinema?

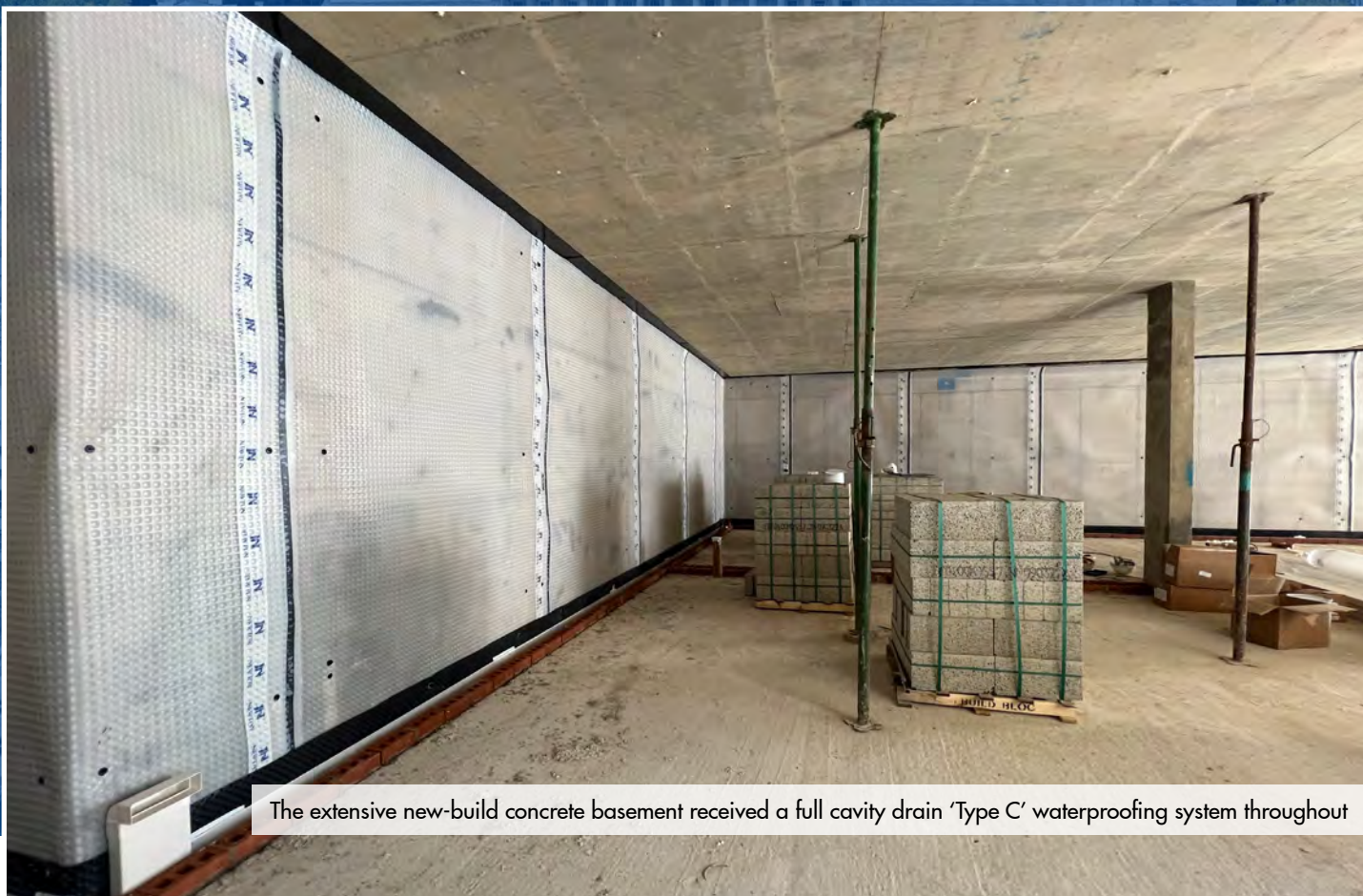


The project required significant groundworks before building





Wall ties were secured into the fixings for the cavity drain system, and inspection ports ensure it can be maintained in future



The extensive new-build concrete basement received a full cavity drain 'Type C' waterproofing system throughout



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### PROJECT SCOPE

To deliver the multipurpose basement and its different needs, the 260m<sup>2</sup> area was divided into an 'external' space for the car lift and garage, and an 'internal' space for the gym, sauna, shower and cinema.

Both areas also needed to be completely dry, defined as a Grade 3 environment by [BS 8102:2022](#). Fortunately, the MJ Rooney team could bring their four decades of experience to bear, including in [bespoke new-build basement design](#).

### THE SOLUTION

To achieve the Grade 3 environment, the waterproofing solution needed to be fully continuous and maintainable.

The primary waterproofing solution was a full internal cavity drain system utilising the [Newton CDM System](#).

To achieve this, the 8mm [508 membrane](#) was installed to all walls with specialist [CDM Multiplug](#) fixings. Across the floor, the 20mm deep [520 eco Floor](#) membrane provided a high drainage capacity, sealed to a high-load DPC with [CDM OverTape](#) to provide continuity through the internal walls.

Beneath the floor membrane [Fibran XPS 500-C](#) delivered an insulated build up, also creating the perfect 50mm space for a perimeter drainage system using [CDM BaseDrain](#).

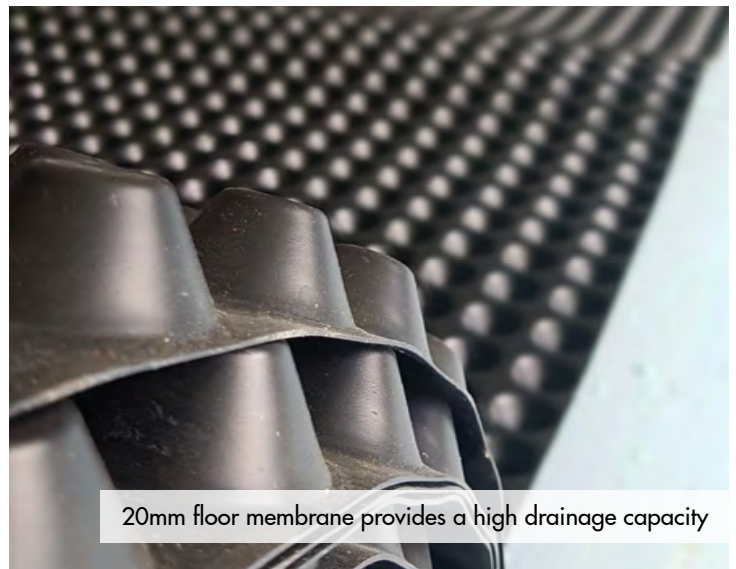
Finally, the drainage system was connected to a [Titan-Pro sump chamber](#) with dual pumps for reliable water removal. A separate [Trojan-Pro sump chamber](#) was also used to remove foul water from the toilet, sink and shower in the gym area.

### THE RESULT

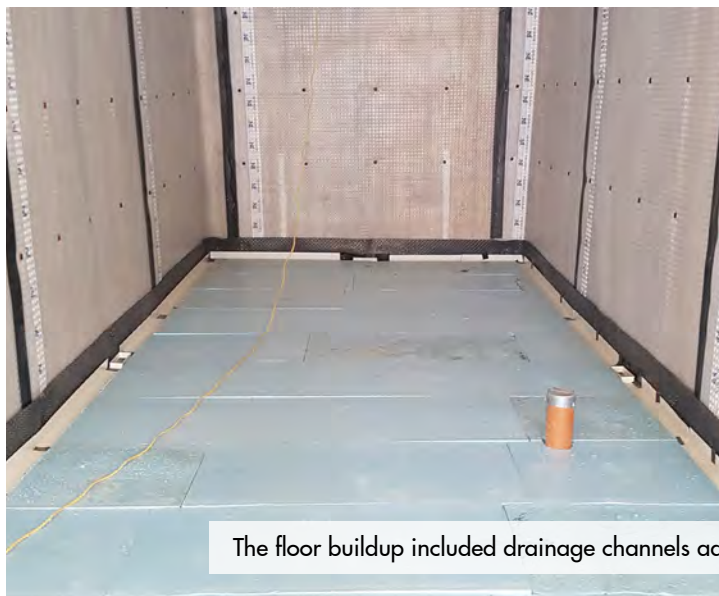
The finished basement houses a beautifully finished series of impressive rooms, protected by the robust and maintainable CDM System, in compliance with all industry standards.



MJ Rooney's trained operatives installed the waterproofing



20mm floor membrane provides a high drainage capacity



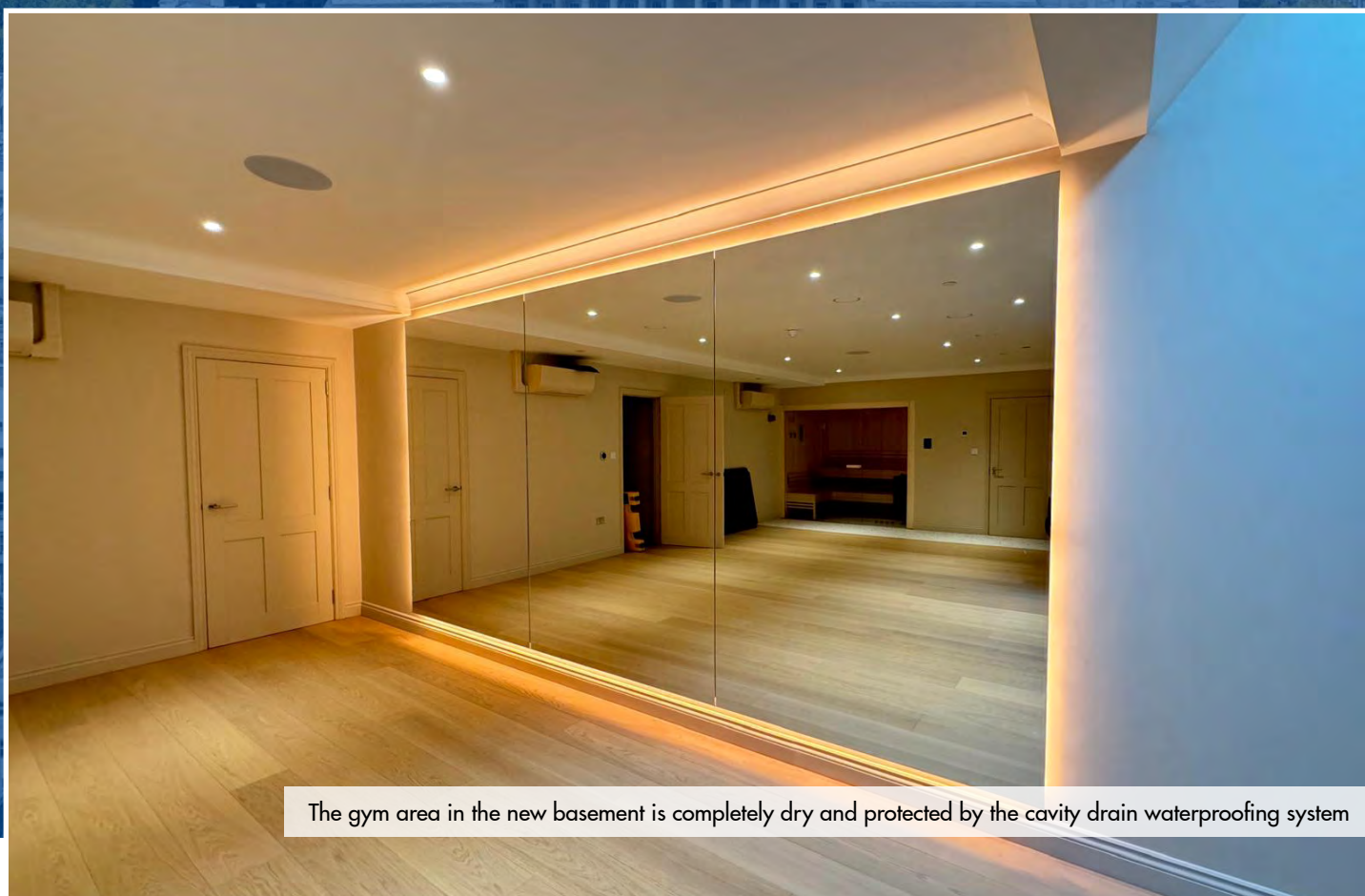
The floor buildup included drainage channels adjacent to closed-cell insulation, covered by the 20mm floor membrane







The rear of the spectacular new property showcases the stunning work by the MJ Rooney team



The gym area in the new basement is completely dry and protected by the cavity drain waterproofing system



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## FEATURED PRODUCTS

- [CDM System](#) - A comprehensive Type C waterproofing system that will usually be suggested when looking for superior levels of protection against water ingress.
- [508 Membrane](#) - BBA approved, high-quality 8mm cavity drain membrane for use within the Newton CDM System.
- [520 eco Floor Membrane](#) - BBA approved, 100% recycled, 20mm deep cavity drain floor membrane delivering high drainage capacity.
- [Fibran XPS 500-C](#) - 50mm deep, closed-cell thermal insulation board made from rigid extruded polystyrene foam (XPS).
- [CDM BaseDrain](#) - Drainage system used with the CDM System to receive water ingress and discharge it to a pump system or drainage.
- [Titan-Pro Pump System](#) - Unique and specialist sump and pump system, specifically designed for use with the Newton CDM System.
- [Trojan-Pro Sump Chamber](#) - Multipurpose sump system suitable for lifting sewage or removing ground and surface water.

## NEWTON SPECIALIST CONTRACTOR:



## Newton Specialist Contractors

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



A luxury new basement cinema completes the space



The car lift delivers the covered parking required by the client