



## **BASEMENT EXTENSION BENEATH A GEORGIAN VILLA**

### Waterproofing a Basement Swimming Pool & Cinema, Tunbridge Wells

#### **TUNBRIDGE WELLS BASEMENT EXTENSION**

Newton Specialist Contractor [MJ Rooney](#) undertook this extensive basement construction project beneath a period Georgian property in Tunbridge Wells, Kent.

Working alongside designers from [Open Architecture](#) and [Croft Structural Engineers](#), the MJ Rooney team needed to carry out deep and large-scale excavations. This included significantly extending the existing basement beneath the period property and the rear garden, whilst retaining the original structure above with minimal disturbance.

#### **ROBUST TEMPORARY WORKS**

Complex temporary works were designed to support the house on stilts during the excavation. Steel sheet piling was also essential to provide support around the site.

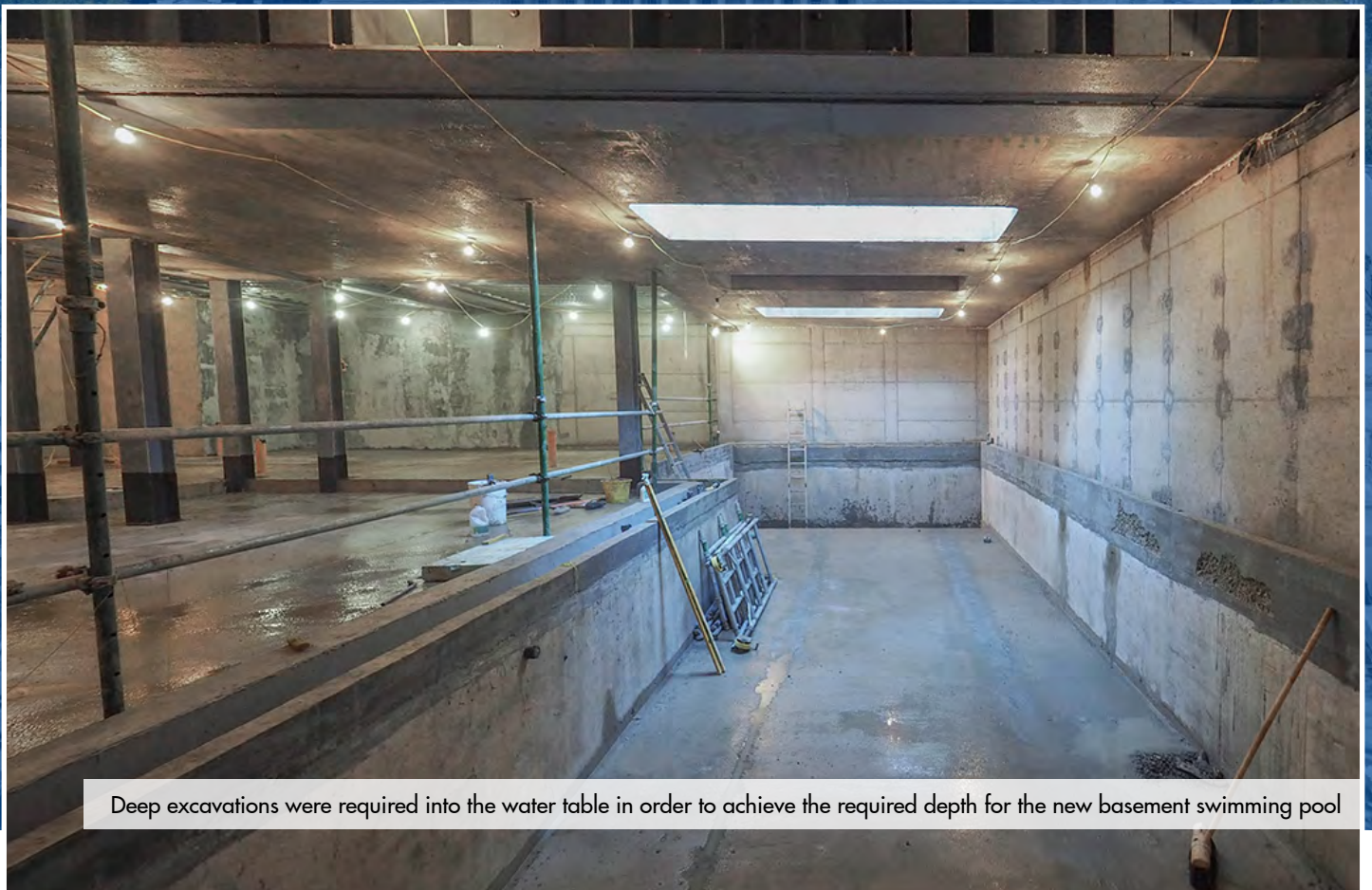
However, this wasn't without its difficulties - the deep excavation works took place within the water table, and restricted site access was problematic for both the piling rig and during the new basement construction. Read on to see how the MJ Rooney team overcame these challenges.



Significant temporary works supported the existing property



The scale of the basement extension included the existing Georgian basement and the area beneath the garden



Deep excavations were required into the water table in order to achieve the required depth for the new basement swimming pool

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### PROJECT SCOPE

The large-scale new basement area was to include a swimming pool, leisure area, sauna, steam room, and cinema. All areas therefore needed to be completely dry, defined as a Grade 3 environment by [BS 8102:2022](#), with a waterproofing design that would account for the specific requirements of the site environment and the structure.

### THE SOLUTION

The primary solution was a full internal cavity drain system utilising our comprehensive [CDM System](#). But first MJ Rooney primed all concrete surfaces with [CDM 906 Lime Inhibitor](#) to prevent any 'free lime' from affecting the CDM System.

[CDM 508 membrane](#) was then installed to all walls to capture water, whilst the [CDM 520 eco Floor](#) membrane provided high drainage capacity across the floor.

A perimeter drainage system using [CDM BaseDrain](#) delivers any captured water to a [Titan-Pro sump chamber](#) with dual pumps for safe and reliable water removal.

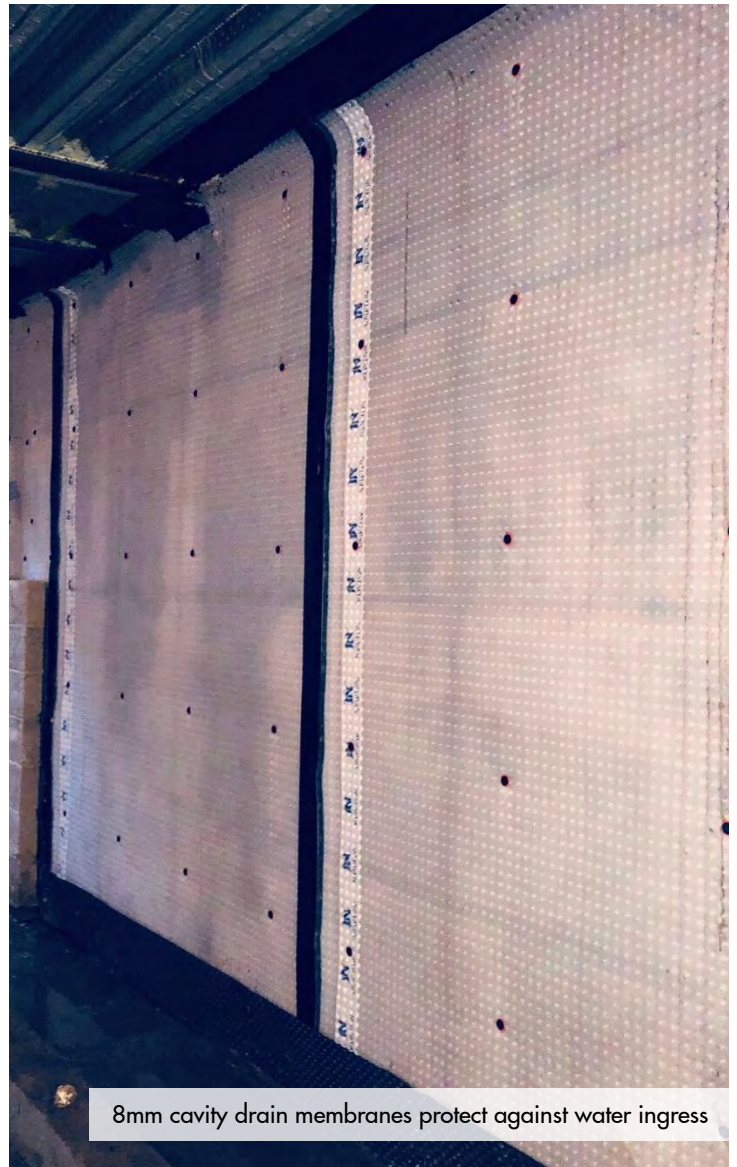
### THE RESULT

MJ Rooney's meticulous approach ensured minimal disruption to the residence while delivering a high-quality, functional new basement in compliance with BS 8102. They also demonstrated their capability by supporting the installation with a 10-year insurance-backed guarantee.

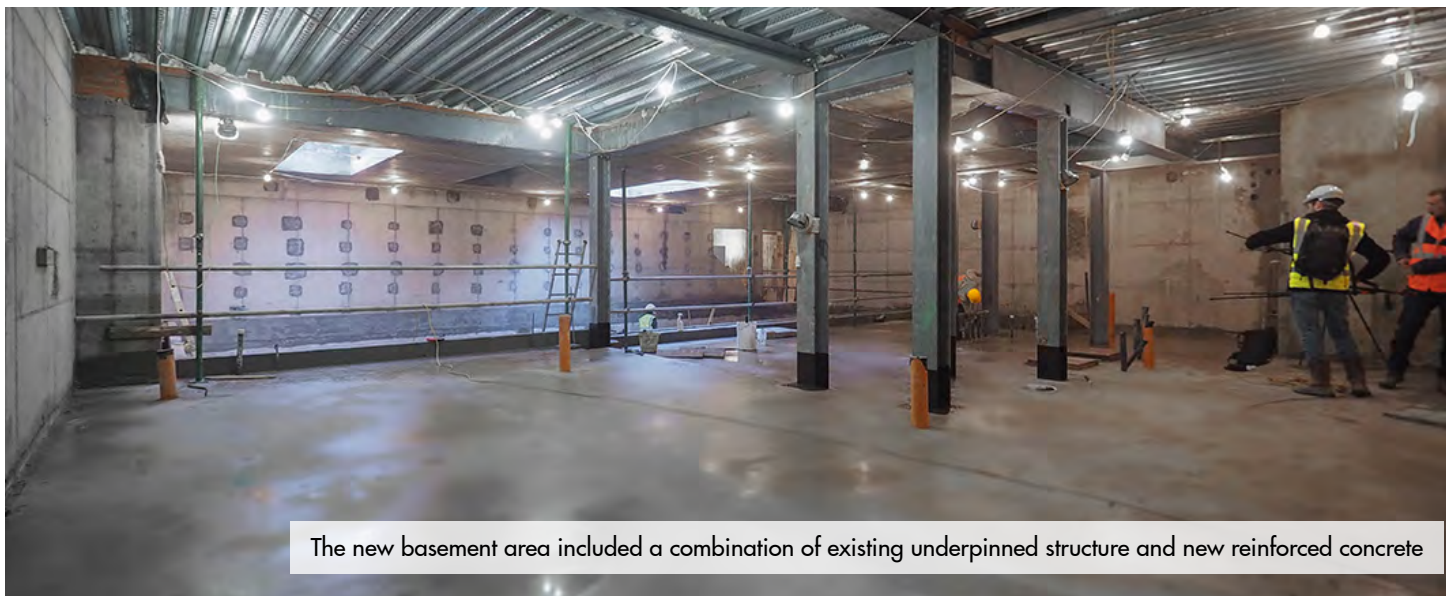
### TESTIMONIAL

*MJ Rooney were extremely professional in every respect. They completed a first-class construction job. I would recommend and use them again."*

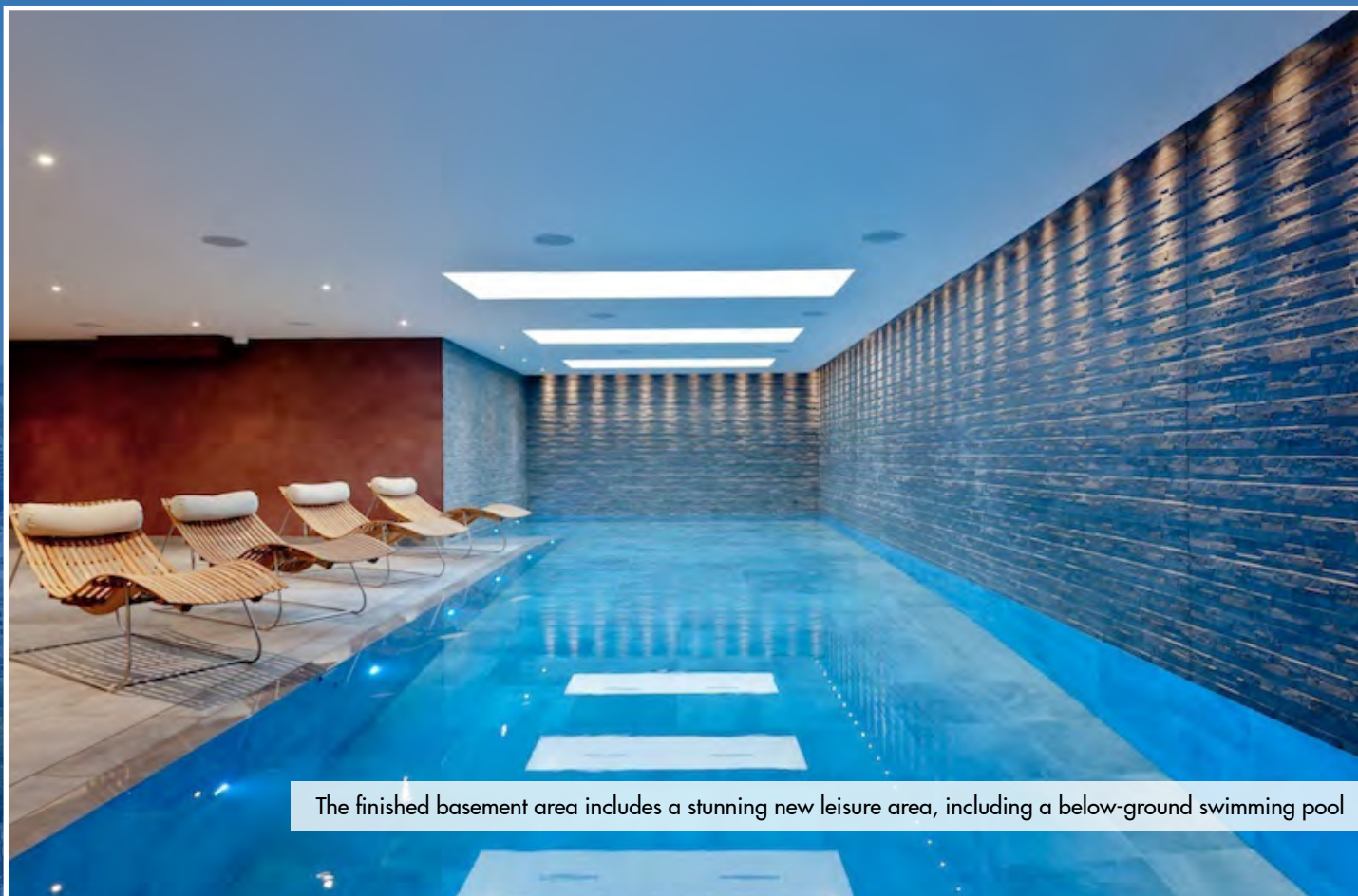
Paul Glenister  
Open Architecture



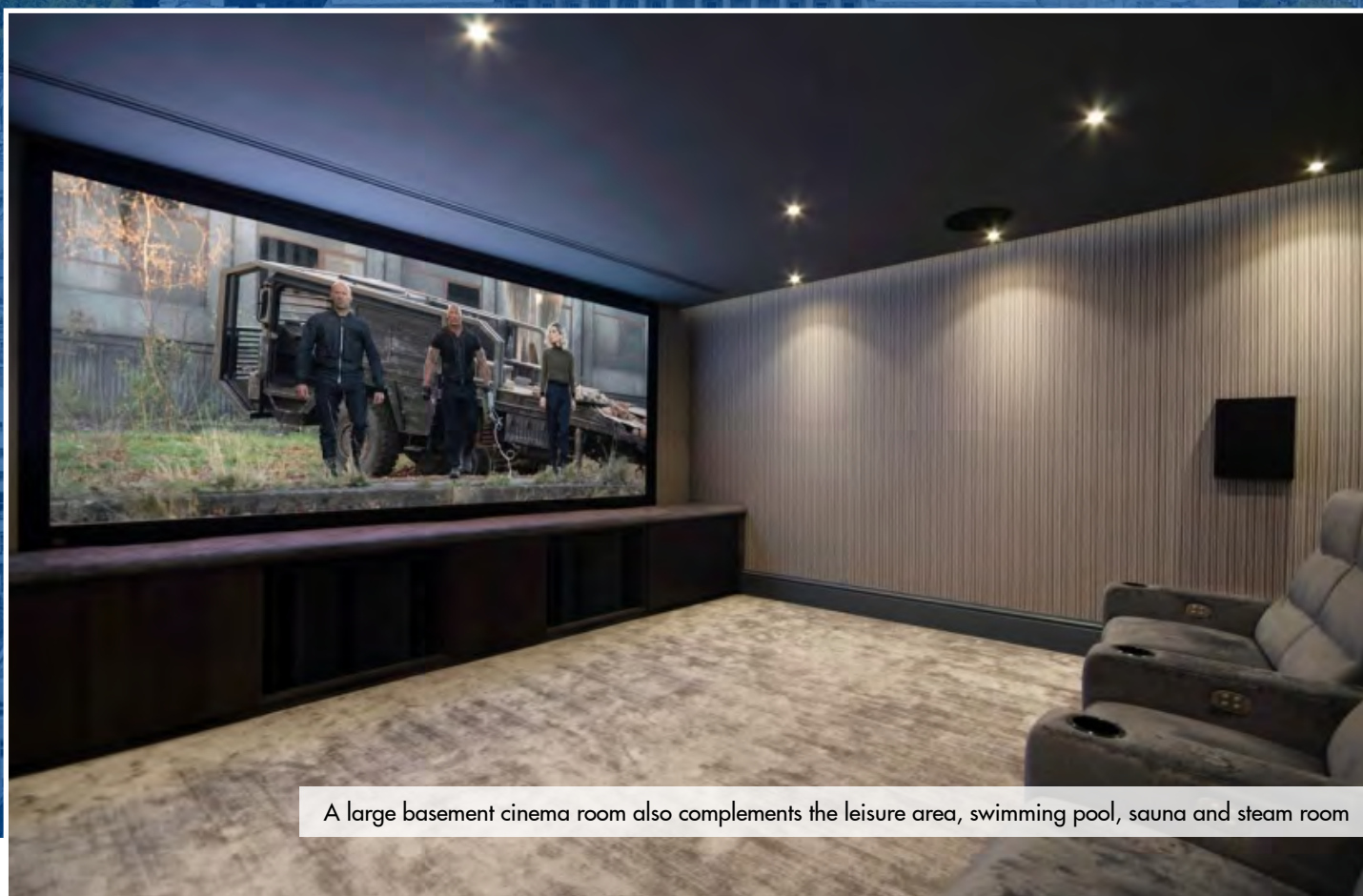
8mm cavity drain membranes protect against water ingress



The new basement area included a combination of existing underpinned structure and new reinforced concrete



The finished basement area includes a stunning new leisure area, including a below-ground swimming pool



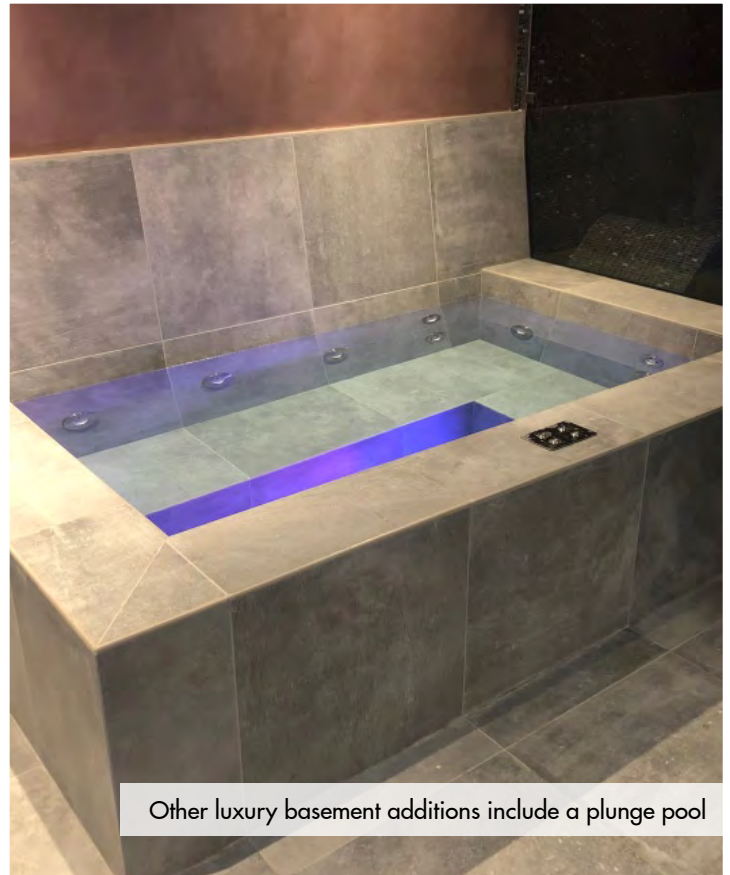
A large basement cinema room also complements the leisure area, swimming pool, sauna and steam room

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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.
- [CDM 508 Membrane](#) - BBA approved, high-quality 8mm cavity drain membrane for use within the Newton CDM System.
- [CDM 520 eco Floor Membrane](#) - BBA approved, 100% recycled, 20mm deep cavity drain floor membrane delivering high drainage capacity across floor areas.
- [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.
- [CDM 906 Lime Inhibitor](#) - Applied to concrete prior to installing the CDM System to prevent the 'leaching' of free lime from the concrete.



### 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.

