



Image credit: Haworth Tompkins Architects

## **WATERPROOFING THEATR CLWYD, NORTH WALES**

### **Refurbishing, Extending & Waterproofing a Grade 2 Listed Theatre**

#### **THEATR CLWYD, NORTH WALES**

[Theatr Clwyd](#) was built in the mid-70s to house both theatre and TV production and is still Wales' main producing theatre. Situated in the hills above the town of Mold, the Grade 2 Listed structure needed urgent reconfiguration and upgrading to expand its cultural role and deliver a performance, music and communal space for North Wales.

Architect [Haworth Tompkins](#) aimed to repurpose the existing fabric, demolishing only where necessary, whilst hitting a whole life zero carbon target.

#### **PROJECT SCOPE**

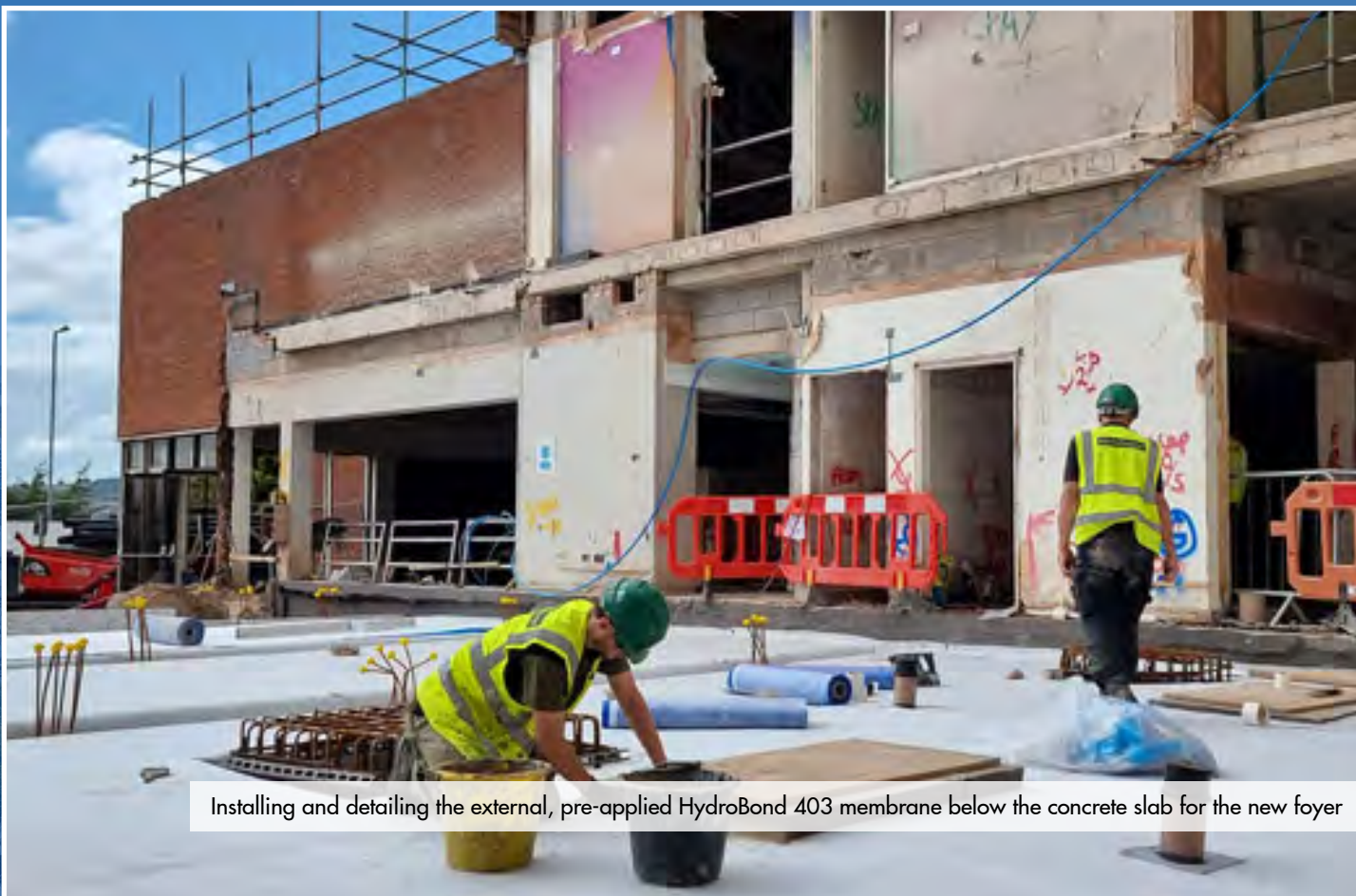
The project included a complete strip out, refurbishing and remodelling the existing buildings, and a new-build timber foyer extension. Main contractor [Gilbert Ash](#) appointed Specialist Contractor [Stonehouse Waterproofing](#) for the multi-phase waterproofing project to each building section.

The project required varied waterproofing strategies, from existing below-ground structures to new proposed retaining elevations and sections of the new build extension.



Significant demolition was required to the existing front





Installing and detailing the external, pre-applied HydroBond 403 membrane below the concrete slab for the new foyer



External detailing using HydroBond 2K-Flex to walls and upstands to ensure continuity of the Type A waterproofing



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### NEW-BUILD FOYER & WORKSHOP

Newton's external, pre-applied sheet membrane [HydroBond 403](#) was chosen to protect the ground-bearing slabs and partially retaining elevations. The flexible and reinforced bitumen coating [HydroBond 2K-Flex](#) was also used for all detailing elements. Finally, a combined internal and external Type A waterproofing system was achieved using the flexible, cementitious [HydroCoat 107 Elastic 2K](#) internally to provide a second layer of protection.

### EXISTING BASEMENT CINEMA

The existing concrete basement was already suffering from water ingress, so Stonehouse specified a full [CDM System](#) to deliver Type C waterproofing protection. Utilising the [CDM 508R](#), an 8mm cavity drain membrane and gas barrier, Stonehouse installed the system across the ground bearing floor slab and to three retaining elevations.

Water captured by the system is drained out using [CDM BaseDrain](#) and [FloorDrain](#) through the only open elevation and directed into the existing clean water drainage.

### LIFT PIT WATERPROOFING

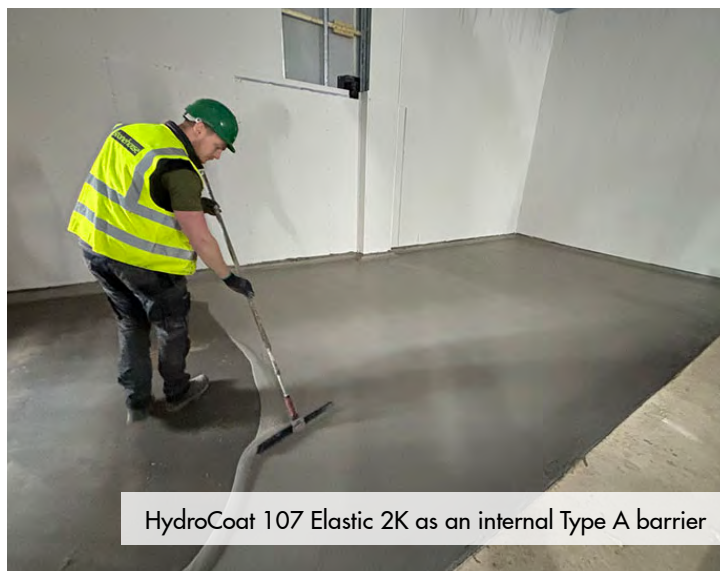
The six lift pits across the site required their own approach, first using [HydroBond 403](#) to the lift pit base prior to concrete casting. [HydroBond 2K-Flex](#) was also used to the external concrete surface, before [HydroCoat 107 Elastic 2K](#) was used as a flexible, internal Type A membrane.

### THE RESULT

Stonehouse have a history of designing and overseeing high quality projects, and a highly experienced team of qualified waterproofing surveyors. Using our advanced product range they delivered Theatr Clwyd's waterproofing on budget, on schedule, and ready for curtain up.



HydroBond 403 membrane below the new workshop slab

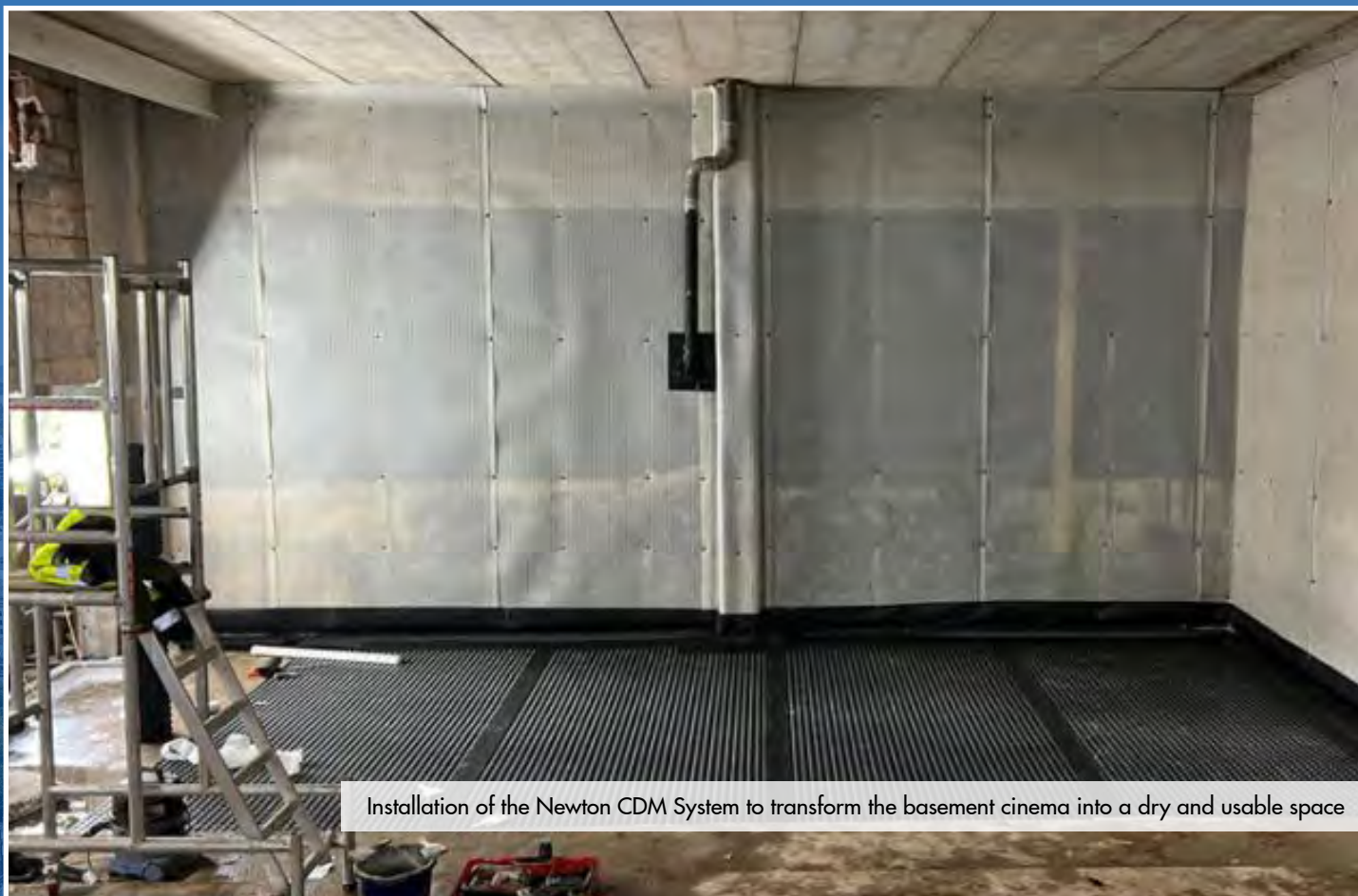


HydroCoat 107 Elastic 2K as an internal Type A barrier

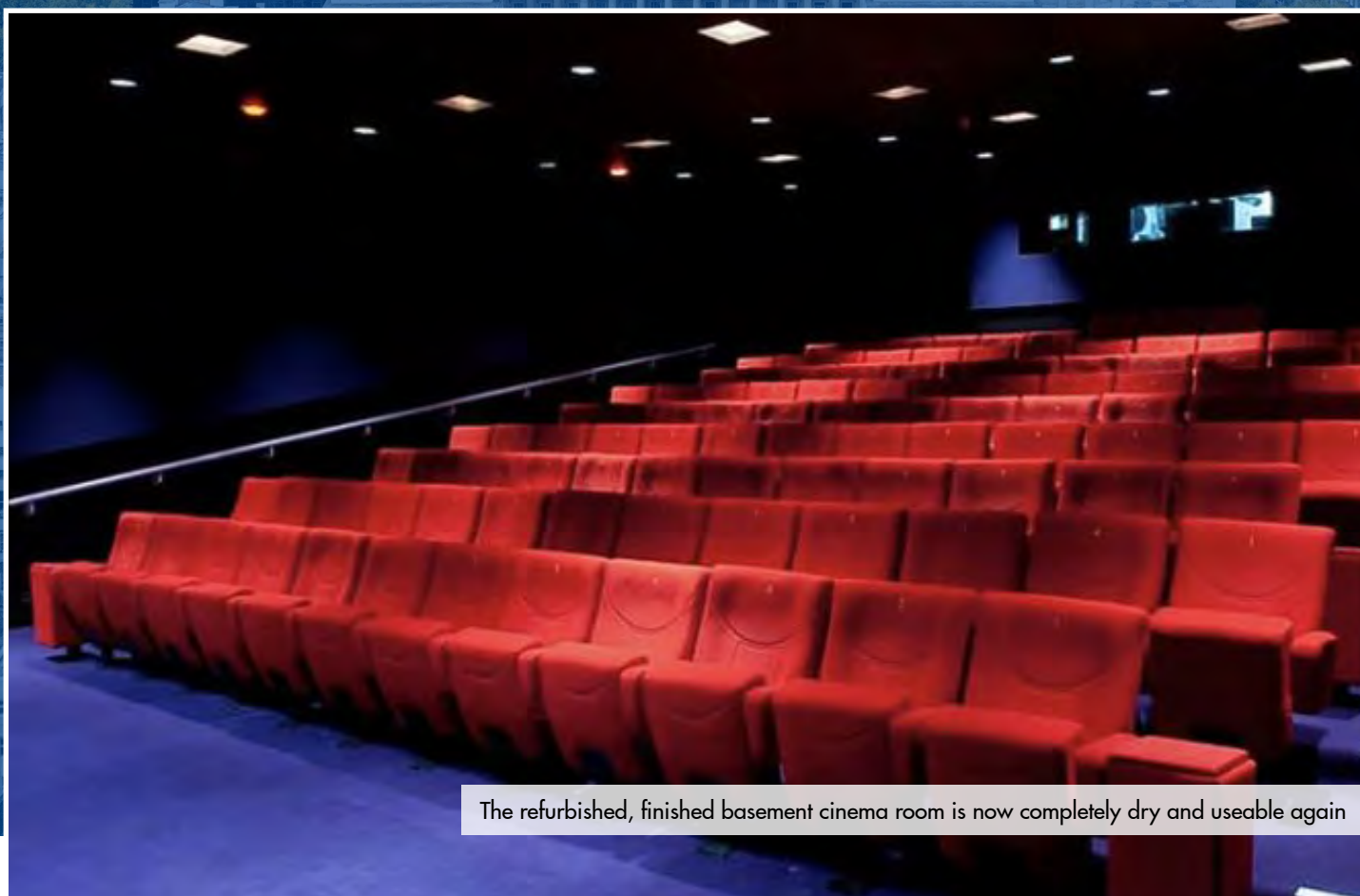


The existing, leaking basement cinema was stripped out and prepared for the installation of a full Type C cavity drain system





Installation of the Newton CDM System to transform the basement cinema into a dry and usable space



The refurbished, finished basement cinema room is now completely dry and useable again



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### FEATURED PRODUCTS

- [HydroBond 403](#) - BBA approved, self-healing sheet membrane which mechanically bonds with newly placed concrete, becoming fully-engaged to prevent water from tracking.
- [HydroBond 2K Flex](#) - A radon gas certified, flexible and reinforced bitumen/rubber waterproofing membrane, for external waterproofing of earth-retaining structures.
- [HydroCoat 107 Elastic 2K](#) - BDA certified, flexible and liquid-applied cementitious waterproofing membrane that can be hand or spray-applied to a variety of substrates.
- [CDM System](#) - A comprehensive Type C waterproofing system, usually suggested for superior protection against water ingress to achieve a completely dry environment.
- [CDM 508R](#) - BBA approved, 8mm cavity drain membrane and certified barrier against radon, methane, CO<sub>2</sub>, and hydrocarbons. For use within the Newton CDM System.
- [CDM BaseDrain & FloorDrain](#) - Drainage system used with the CDM System to receive water ingress at weaknesses in the structure and discharge it to a safe drainage point.



Lift pit base construction with HydroBond 403 membrane



External lift pit waterproofing using HydroBond 2K-Flex

### NEWTON SPECIALIST CONTRACTOR

# stonehouse

## 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.



Internal cementitious coating with HydroCoat 107 Elastic 2k