



The Booking Office, Edinburgh

Waterproofing a Basement on Steel Columns

The Project

Waverley Bridge in Edinburgh is a unique piece of Scottish architecture that sits directly on the city's famous Royal Mile. Built in the 1890s, the structure is not only a road bridge, but also forms the roof of Edinburgh Waverley train station, with active train lines running directly beneath.

Newton Specialist Contractor [Wise Basement Systems](#) were tasked with waterproofing Waverley Bridge Booking Office's existing basement, ahead of its conversion into a Wetherspoons.

The Solution

To overcome the challenges of the site, Wise proposed that a new internal structure be built within the existing space, which would allow a Type C [Newton CDM System](#) waterproofing solution to be installed.

As a listed structure, the drainage channel could not be cut into the existing slab, so Newton's [Fibran XPS 500-C](#) closed-cell insulation acted as the perfect 50mm spacer, allowing a floor membrane to be laid over the full 700m² area, and Newton Basedrain to be installed around the perimeter, to direct any captured water to the gravity drainage beneath the floor slab.

The main contractor, Sanderson Ltd, installed a sloping roof above the new internal structure, capturing and directing leaks safely behind the cavity drainage membranes.

The Result

Carried out in compliance with BS 8102:2009, Wise Basement Systems effectively protected the basement for years to come, as well as providing support on site to the main contractor.

The unusual project was also Highly Commended for the 'Project of the Year Award' by the Property Care Association.



Steel beams supports the steel and concrete basement



A busy train station runs directly underneath..



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"We initially spoke with Wise regarding Waverley Station to seek their advice and were dealt with quickly and professionally with a meeting on site to discuss our options.

I was very impressed with their suggestions, and once we gave them the go ahead, the installers were extremely helpful on what was a very demanding and tricky project, and worked well with other trades. I would have no hesitation in picking up the phone to Wise in future, or in recommending their services."

John S, Construction Manager, Sanderson Ltd

The Products

CDM SYSTEM

The professionals' waterproofing system of choice, this internal and fully maintainable system is ideal for new build or refurbished basements, utilising floor and wall membranes, fixing plugs, sealing tapes, drainage channels, insulation boards, and sump and pump chambers.

FIBRAN XPS 500-C

Closed-cell thermal insulation board that, alongside the Newton Bsaedrain, helps to form a fully drained supporting spacer below the floor drainage membrane that can safely capture and manage water.

BASEDRAIN

A core set of drainage components used within the Newton 500 system that receives ingressing water and directs it to a safe discharge point. 18mm holes drilled in both sides of the profile, as well as to the top surface, allows water within the spacer zone to enter the drainage channels more easily.



The busy road was one of the main sources of water ingress.



A new structure within the building was required.



The CDM system uses sump and pump systems to remove water.

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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