

Peterhouse College, Cambridge

- Architect: John Simpson & Partners
- Structural Engineer: Bidwells
- Design & Build Contractor: Kier



Peterhouse College is the oldest Cambridge University college. RIW provided waterproofing expertise for the refurb and new build of additional student accommodation.

The Challenge

The main waterproofing requirements were for a full basement to the new build extension; waterproofing continuity was then required between the new and existing basement. A completely dry environment (Grade 3, BS: 8102) was required for the basement area, with various damp proofing requirements above ground, requiring the tanking to link up to the DPCs for full continuity of the system.

It was important to the design and build contractor that the project was kept on programme, so a system that was quick and easy to install was desired.

The Solution

Due to the internal required environment, it was decided that a dual tanking system was necessary. A decision was taken to use a watertight concrete to provide Type B integral protection, with RIW Cavity Drain R20 used over the watertight concrete slab and walls to control any potential water ingress. Any water collected by the RIW Cavity Drain system was then to be pumped back out of the basement.

RIW Toughseal was used extensively to provide damp proofing around the basement soffit and to the base of partition walls that penetrated the RIW Cavity Drain system. At the partition walls RIW Aggregate Grade 1 was broadcast into the second coat of Toughseal to provide a key for finishes.

At the joint between the new and existing basement, RIW Multijoint and RIW Cementjoint were used to provide waterproofing continuity.



Above ground level a mixture of two RIW liquid membranes (Toughseal and Flexiseal) were used to provide continuity to DPC levels, and damp proofing as required. RIW Sheetseal 9000 was also used in some locations as a DPC.

Featured Products

RIW Cavity Drain R20

An internal tanking cavity drainage membrane system comprised of high density polyethylene drain board with 20mm studs, used where site conditions or structural design make it difficult to use traditional tanking methods.

RIW Toughseal

A liquid applied coating, RIW Toughseal is solvent free, polymer modified, colour coded and based on epoxy resins. Typically used in areas that require excellent tensile adhesion, chemical resistance and abrasion resistance such as plant rooms and under raised access floors.

RIW Multijoint

An impermeable, waterproof EVA foam resistant to salts and most chemical attack. It also has good UV resistance and is therefore suitable for use in exposed exterior applications. Movement capability of up to 90% of the construction gap is achieved