

New Build Extension The Sarsden Estate The Cotswolds

Client: Construction Company

Completed: 2016

Case Study No: 243

- New Build Waterproofing
- Combined Type A & C System
- Full Design & Installation Package

The Project:

New build extension with basement level to this £3.3m listed Manor House on the prestigious Sarsden Estate in the Cotswolds.



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Sarsden Estate, The Cotswolds - The Problem

Protectahome were asked by the main contractor to provide a specialist waterproofing design and installation to a new build extension at Houghton House.

Houghton House, constructed in 1830, was formerly part of the prestigious Sarsden Estate and the grade II listed building recently sold for £3.3m.

The new extension provides a link between the main house and the nearby coach house with a basement level that required a waterproofing solution that was suitable for the varying ground conditions.

Protectahome's experienced design team developed a combined waterproofing system that would incorporate both internal (Type C Drained Protection) and external (Type A Barrier Protection) systems, in accordance with BS8102:2009.



THE BASEMENT INFORMATION CENTRE MEMBER

British Structural Waterproofing Association



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Sarsden Estate, The Cotswolds - The Solution

To create the internal system, 8mm cavity drain membrane was installed to the internal walls and floor slab surfaces.

A perimeter drainage channel and sump chamber were formed in the slab to accommodate periphery drainage channel and 2 automatic sump pumps respectively. The specialist pumps were also fitted with a battery backup to aid in the event of a temporary power interruption.

The external system integrated a range of products that were installed to the exterior of the new structure incorporating a land drain.

A pre-applied composite sheet was installed underneath the newly laid floor slab. An elastomeric liquid membrane was applied to external vertical wall surfaces before an external drainage layer membrane was installed over the same and linked to the land drain.

A cementitious render was also installed to one original earth retaining wall of the coach house to prevent water ingress from below the existing structure. This was complimented by a Bentonite swelling compound around the wall/floor junction for extra protection as this area was especially susceptible to water ingress.

The system fully complied with the requirements of BS8102:2009 and a Protectahome long term guarantee was issued upon work completion.



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