

Project Profile - Buildings & Commercial Construction



PROJECT

**Cotton Building, Spinningfields,
Manchester**

SUMMARY

Waterproofing of secant piled
basement

PRODUCTS

**Monolevel RM, Cemprotect Elastic,
Cemprotect Geo80**

CLIENT

Allied London

MAIN CONTRACTOR

McLaren

APPLICATOR

Gunform

BACKGROUND ►

The Cotton Building is currently under construction in Manchester's busy Spinningfields district. Due for completion in April 2016, it will comprise 160,000ft² of commercial office space and over 30,000ft² of public amenity space.

Two basement levels are being used to provide parking, plant requirements and a gym and cycle facility, whilst the upper six levels are for office accommodation. The building will also comprise a business support centre, including seminar space, meeting rooms and exhibition facilities serving tenants and the general public. The secant pile construction in the basement required a waterproofing system that was capable of resisting negative water pressure, even at critical points with upstands, floors and capping beams.

THE SOLUTION ►

Flexcrete worked very closely with the design team to advise the best solution for the project. **Monolevel RM**, a pre-bagged cementitious mortar for structural waterproofing, was specified due to its suitability for providing cost-effective, waterproof rendering of basement areas. **Monolevel RM** is a single pack material that is simply mixed with water on-site and is extremely quick and easy to apply by a single coat application. For this project, the product was installed by wet spray techniques due to its usage over a very large area. It can be applied in thicknesses ranging from 5-50mm even on a vertical face and crucially, is resistant to 7 bar positive and negative hydrostatic water pressure at just 10mm applied thickness.

Monolevel RM conforms to the requirements of BS 8102:2009, the Code of Practice for Protection of Structures Against Water from the Ground. It provides the optimum 'Grade 3' completely dry environment. As **Monolevel RM** is fibre reinforced, it provides excellent tensile and impact strength, whilst preventing cracking. Its high bond strength exceeds the tensile strength of concrete and the physical properties of the cured material are similar to base concrete.

To ensure the required waterproofing was achieved at the critical detail points, **Cemprotect Elastic**, a two component, elastomeric, cementitious coating was used. The product was applied by brush in two 1mm coats and was reinforced with **Cemprotect Geo80**, a thermally bonded, non-woven geotextile to help accommodate any differential movement. It cures to form a tough, durable barrier to water even from the negative side.



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