



Case study Liverpool ONE

Architect: Masterplan by BDP
Main Contractor: Mansell Construction Services
Specialist Contractor: Quickseal
Products Specified: Sika® 1 and SikaDur® Combiflex

Waterproofing

For a maze of basements requiring refurbishment as part of one of the country's largest regeneration schemes, architects required a waterproofing system that was both versatile and proven. Sika® 1 from global building product manufacturer Sika offered the right credentials.

Liverpool ONE, a £1 billion regeneration programme, comprises 42 acres of open-air shopping and leisure facilities and involves the careful restoration of several historic buildings. These include the Russell Building, Compton House, the Stanley Building and County Palatine, which were built between the 1860s-80s.

These buildings have a maze of basements that equated to approximately 50,000 sq ft of potential commercial rental space. The basements had deteriorated with age and started to let in water making them unlettable. However, each basement has now been transformed into extensive profitable space. For example, in the Palatine and Stanley buildings, they will be used for additional retail space, whilst in the Russell Building, the basements can now be used as service areas.

The conversion of these basements to useable space is thanks to the first class Sika® 1 Pre-bagged Waterproofing System which has provided total protection from water ingress, allowing the basements to be used by the new tenants with peace of mind.

The Sika® 1 Pre-bagged Waterproofing System incorporates a specially developed admixture – a unique colloidal liquid – which is mixed with specially blended quality controlled pre-bagged mortars. Once applied to the walls and floors, the admixture reacts with water by turning into a jelly-like substance, blocking all gaps and capillaries in the pre-bagged mortars, and providing an impregnable and invisible seal. The mortars bonding monolithically with the substrate, it essentially becomes one with the structure.

Highly versatile and capable of tackling the most challenging of projects, it was the ideal system to provide protection at the four ageing buildings at Liverpool ONE.

The system provided specialist contractor, Quickseal, with the necessary solution to effectively seal the buildings' vast basements. The company started by casting a layer of Sika® 1 Spritz Mortar over the basement walls. This was followed by a layer of Sika® 1 Render Mortar and Sika® 1 Finishing Mortar. Sika® 1 Spritz Mortar was applied to the floor, followed by a third layer of Sika® 1 Screed Mortar.

To ensure a complete seal, Quickseal also used Sika® advanced jointing system, SikaDur® Combiflex, which was applied to all joints and cracks. Easy to install, it provides a reliable method of sealing cracks whilst allowing for movement in the building. Suitable for both internal and external use on new build and refurbishment projects, it can accommodate movement in more than one dimension as well as variations in joint width. This, combined with the Sika® 1 Pre-bagged Waterproofing System, created a complete package that provided the basement with a completely dry environment.

Without a certified and proven system such as Sika® 1 Pre-bagged Waterproofing System protecting the basements of these buildings, the future occupiers could have experienced significant problems were water to intrude. However, fully protected, they can now look forward to a dry and prosperous future.



Sika® 1 Waterproofing Systems

Waterproofing Above and Below Ground for both New Build and Refurbishment

Sika® 1 Pre-Bagged Waterproofing System provides uncompromised protection from water and vapour ingress for the structure's lifetime. Whether it's keeping water in or out, the system is backed by 100 years of experience in advanced waterproof technology along with British Board of Agrément (BBA) certification.

Available as a screed and render system, it can easily be applied to all walls and floors. The key ingredient is the Sika® 1 admixture. This colloidal silicate liquid reacts to moisture by expanding into a jelly-like substance – blocking all gaps and capillaries in the structure for a watertight seal.

The system can be used to meet the requirements of all 4 grades of waterproofing, as outlined by BS8102: 1990, Protection of Structures against Water from the Ground. Which of these grades is required depends on the end use of the structure.

It is suitable for a wide range of applications including basements, underground car parks and subways. The system can also be used on structures designed to retain water such as swimming pools, tanks and bund walls

NBS Specification

For fast, simple specification of the Sika® 1 Pre-Bagged Waterproofing System and all related products, visit the NBS website. By simply entering the specific project details, it will outline exactly what parts and how much of the system is required.



Grade 1

Typical Structure & Requirements

Basic utility, Basement Car Parks, Plant rooms (excluding electrical equipment).

BS 8102:

Grade 1: Slight seepage and damp patches are tolerable.

Grade 2

Typical Structure & Requirements

Residential and Commercial Basements Workshops, plant rooms and retail storage where a drier environment is required.

BS 8102:

Grade 2: No water penetration but moisture vapour tolerable.

Grade 3

Typical Structure & Requirements

Ventilated residential and working areas including offices, restaurants and leisure facilities.

BS 8102:

Grade 3: A dry environment is required and water penetration is intolerable.



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