



Case study The Lancasters

Architect: Nilsson

Main Contractor: Northacre & Minerva Plc

Specialist Contractor: Aquarend Limited

Products Specified: Sika®-1

Waterproofing

A refurbishment project that used waterproofing intelligently is The Lancasters in London. The Georgian terrace was ailing until its £80 million redevelopment into 77 apartments. Its Grade II Listed facades were kept and the interior rebuilt. Three subterranean levels were also created for car parking, gyms, swimming pools and a business centre.

The redevelopment project by Northacre, in conjunction with Minerva PLC, required a high level of integrated waterproofing, as any remedial action would prove highly inconvenient. Nilsson Architects therefore turned to specialist consultant TASC Associates for specification advice.

A range of products from Sika, global manufacturer of building materials, were selected to create the watertight envelope, installed by specialist structural waterproofing contractor Aquarend.



The products included Sika 1 Pre-bagged Waterproofing System, which has been successfully used for over 100 years. It ensures that specifiers can meet the waterproofing requirements of a project with one system – crucial where the careful integration of products can lead to detailing issues, which can compromise success.

A pre-bagged render system, it comprises a blend of kiln dried specially graded aggregates and cements and a liquid waterproofing admixture which is mixed into the render and provides an innovative and robust way of preventing water ingress.

Once applied to the walls and floors, the multilayered render system bonds monolithically to the prepared substrate. The admixture within the render reacts to water by turning into a jelly-like substance, blocking all gaps and capillaries, providing an impregnable and invisible seal. The system is so effective that not only was it used to keep water out at The Lancasters, it was also used to keep water in the basement's swimming pools.

The basement was divided into four areas: habitable, car parking, plant and leisure facilities as well as interconnecting corridors. The areas required different standards of waterproofing in line with BS8102: 2009, 'Code of practice for protection of below ground structures against water from the ground', which can be achieved using different grades of the Sika 1 system.

At The Lancasters, the car parking areas were waterproofed to Grade One, all below ground habitable areas, leisure facilities, kitchens and plant rooms were waterproofed to Grade Two and the communications rooms of the building, containing sophisticated electronic equipment, were waterproofed to Grade Three.



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 3 grades of waterproofing, as outlined by BS8102: 2010, 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.



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.

NBS Specification

Sika®-1 pre-bagged waterproofing system - In accordance with NBS specification clause J10 Cementitious Mortar Tanking/Damp Proofing Clause 110 Proprietary Mortars

Sika®-1 pre-bagged waterproofing system, certified by the BBA Certificate number 00/3761, should be applied to a sound and clean open texture surface, free surface contaminants. Joints and cracks subject to movement should be treated with Sikadur® Combiflex® Jointing system. The Sika®-1 pre-bagged mortars should be mixed with diluted Sika®-1 Liquid Waterproofing Admixture to provide the multi-coat components for the waterproofing systems and the substrate pre-soaked immediately prior to application



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