



Case study Waterproofing Gateshead Leisure Centre

Client: Gateshead Council
Main Contractor: Willmott Dixon
Consulting Engineers: Cundall
Specialist Contractor: Quickseal
Products Specified: Sika®-1 pre-bagged waterproofing System and Sikadur® Combiflex®

Following decades of usage, the Gateshead Leisure Centre, Tyne and Wear, was suffering from age. To repair its badly leaking pool and restore the entire facility to its former glory, it was shut for a year so that a multi-million pound refurbishment scheme could be completed. A combination of the renowned Sika®-1 waterproofing system and Sikadur® Combiflex®, from global construction material producer Sika®, was chosen to ensure that following the remedial works, the swimming pool would remain watertight for decades to come.

The scheme, delivered by main contractor Willmott Dixon as part of a design and build contract with Gateshead Council, forms part of the Building an Active Future Programme (BaAF). The programme, which involves investing £36 million, is part of a plan to improve the health of residents in the town by 2030.

To ensure that the renovated pool was watertight and would not leak as it had previously, the selection of the waterproof membrane had to be carefully considered. Not only did it have to remain watertight whilst submerged, but it also had to be able to resist the chlorine and ozone that are used to keep pools clean.

Sika®-1 was specified by consulting engineering firm Cundall for its market proven abilities. The system is fully certified by the British Board of Agrément (BBA), which stated that “Sika®-1’s pre-bagged waterproofing system will provide an effective barrier to the transmission of liquid for the life of the building to which it is applied”. Crucially, owing to the harsh and chemical environments that swimming pools represent to concrete, Sika®-1 is exceptionally resistant.

Sika®-1 is a total waterproofing system comprising prebagged mortars, renders and screeds – ensuring ease of use and onsite quality control. It is so effective at waterproofing due to the Sika®-1 admixture, a colloidal silicate liquid that swells when in contact with water. This seals the pores and capillaries of mortar, ensuring a 100% watertight seal – ideal for a swimming pool, where water retention is of the essence.

Specialist contractor Quickseal was appointed to carry out the waterproofing works which were completed to BS1802 Grade 3. The fully trained operatives from Quickseal cast a layer of spritz mortar over the bottom and sides of the tank, totally covering the existing slab. This was followed by a second and third layer of Sika®-1 Finishing Mortar and Render for the walls and Sika®-1 Prebagged Screed mortar for the bottom.

To ensure that the swimming pool was 100% watertight, all joints and junctions were sealed with Sika®’s Sikadur® Combiflex®, consisting of a Sika® Hypalon strip and Sikadur® 31 epoxy resin adhesive for fixing. The system is elastic, rot proof and resistant – crucial considering the chemical composition of swimming pool water.

Once the Sika®-1 waterproof membrane had been installed and the joints sealed with Sikadur® Combiflex®, the pool was re-tiled in white, for the sake of hygiene and aesthetics.



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



Sika Limited, Watchmead, Welwyn Garden City, Hertfordshire, AL7 1BQ
Tel: 01707 394444 Fax: 01707 329129 Email: info@sika.co.uk www.sika.co.uk

