



SIKA AT WORK

THAMES TIDEWAY, LONDON, UNITED KINGDOM

CONCRETE PRODUCTION: Sika® ViscoCrete®, Sika® Sigunit®

WATERPROOFING: SikaInject®, Sika Waterbar®, Sika Elastomer®,
Sika Tricomer®, Sikaplan®, SikaProof®

CONCRETE REPAIR: Sika® MonoTop®, Sikadur®

GROUTING: SikaGrout®

ROOFING: Sarnafil®

BUILDING TRUST



SIKA SOLUTIONS FOR EUROPE'S LARGEST WASTEWATER TUNNEL

PROJECT DESCRIPTION

The Thames Tideway Tunnel, often called London's "Super Sewer", is one of the UK's largest ever civil engineering projects. Stretching 25 km beneath the River Thames, the tunnel captures and transfers sewage overflow that would otherwise enter the river, thereby protecting London's environment and ensuring the city's wastewater infrastructure remains fit for the next 120 years. Construction began in 2016, with completion scheduled for 2025.

The project is operated by Tideway and supported by the UK government. Once operational, it will reduce untreated discharges into the Thames from around 40 million tonnes per year to almost zero, significantly improving water quality and biodiversity in the capital.

Sika contributed concrete admixture, waterproofing, and injection technologies for the project, supporting the project's durability, watertightness, and long-term performance requirements.

PROJECT REQUIREMENTS

The construction of a deep tunnel running up to 65 meters below the Thames presented extreme geotechnical and environmental challenges. The entire system had to withstand constant groundwater pressure, aggressive soil and water chemistry, and long-term structural loads.

Strict durability and watertightness standards were set to ensure a 120-year design life with minimal maintenance.

Tunnel segments, shafts, and connection structures required dense, impermeable concrete and high-performance waterproofing systems that could be installed safely and efficiently under tight schedules.

Sika's experience in global tunnelling and infrastructure projects made it a natural choice for the project's technical and environmental demands.



SIKA SOLUTIONS

Sika provided a comprehensive range of solutions covering concrete technology, waterproofing, repair and injection systems, supported by close technical collaboration with designers, contractors, and site teams. Solutions were applied across precast and in-situ concrete works, sprayed concrete operations, shaft waterproofing, cross passages, head houses, and associated structures.

Concrete admixtures

Sika delivered a full range of admixture solutions for all concrete types used on the project:

- *Sikament® and Sika® ViscoCrete® admixtures*
For precast TBM segments, secondary linings, and diaphragm walls to achieve high workability retention, low permeability, and dense microstructure.
- *Sika® Sigunit® accelerators*
For sprayed concrete linings (SCL) used in shafts, tunnel enlargements, and cross passages, providing rapid early strength development and improved rebound control.
- *Concrete admixtures for grouting and precision placement*
Ensuring consistent performance in segment backfilling and void filling.

Waterproofing and Joint Protection

The tunnel relies on a multi-layered waterproofing concept using systems suited to deep, high-pressure environments:

- *Elastomer & Tricomer Waterbars*
Installed at key joints to prevent water ingress between concrete sections.
- *Sikaplan® membrane systems*
Applied in caverns and adits, providing durable, flexible waterproofing under high hydrostatic pressure.
- *SikaProof® pre-applied membranes*
Used for head houses and kiosk structures where ground conditions demanded a bonded waterproofing solution.
- *SikaInject® resins*
For sealing cracks, construction joints, and localized leak repairs during excavation, lining, and fitout.

Concrete Repair, Bonding & Grouting

- *Sika® MonoTop® mortars and Sikadur® structural adhesives*
Used for defect repair, precision finishing, and strengthening works.
- *SikaGrout®*
Applied for bedding precast components, filling voids, and ensuring long-term stability.

Roofing Solutions

Sarnafil® roofing membranes

Installed on above-ground kiosks and head houses, providing robust weather protection and long-term durability.

Technical Services

Sika Limited (UK) supported the project through:

- Mix design optimization for precast and in-situ concrete
- Material testing and quality control
- Waterproofing detailing support
- Onsite troubleshooting during excavation and lining works

This hands-on involvement ensured consistent specification compliance across all three major tunnelling sections.



THAMES TIDEWAY, LONDON



PROJECT PARTICIPANTS

Owner/Client: Tideway

Main Contractors:

West joint venture of BAM Nuttall, Morgan Sindall and Balfour Beatty Group (BMB JV)

Central joint venture of Ferrovial Agroman UK and Laing O'Rourke Construction (FLO JV)

East joint venture of Costain, Vinci Construction Grands Projets and Bachy Soletanche (CVB JV)

Engineer: Jacobs / Atkins / Arup Joint Venture

Sika Organization: Sika Limited (United Kingdom)

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