

SDG

STRONGER
TOGETHER

HUB BY PREMIER INN OLD MARYLEBONE ROAD, LONDON

MAIN CONTRACTOR

Riverlinx CJV/SPV

PRECAST MANUFACTURER

Banagher Concrete

DATE

2022

PROJECT SUMMARY

SDG are proud to be a supplier of structural waterproofing and concrete protection to London's new Silvertown Tunnel.

The Silvertown Tunnel will be a new 1.4-kilometer twin-lane road tunnel under the River Thames, linking North Greenwich and Silvertown. The £2 billion infrastructure project will feature a dedicated lane for buses, coaches, and HGV's, allowing for a significant increase in public transport capacity across the Thames.

THE CHALLENGE

With any piece of critical infrastructure significant life span is a key design element. As governments continually work to build tomorrow's world, manufacturers such as Master Builders Solutions do their best to harness technological material advantages to prolong the life of these structures. With the potential for indefinite exposure to challenging ground conditions, the selection of the right structural waterproofing solution and concrete protection system is critical.

OUR SOLUTION

The key to sound connections between precast and existing in-situ concrete is to utilise a deformation bearing to absorb surface unevenness and distribute the load evenly between both elements.

With the assistance of Calenberg Germany, we proposed the use of their Bi-Trapeze elastomeric bearing for use with the precast elements. The elastic effect of the Bi-Trapeze bearing works to transfer force centrally in structural connections while also compensating for deviations in the contact surfaces. Through elastic deformation, Bi-Trapeze bearings easily accommodate surface defects such as unevenness.

THE RESULTS

MasterSeal 7000 CR is the structural waterproofing and concrete protection system with a unique combination of application and performance properties that meet the challenges of aggressive environments. The performance proven MasterSeal 7000 CR system significantly extends the life cycle of concrete structures.

- **Fast and easy application** by rolling or spray at temperatures from 50C to 350C
- **Excellent curing properties**, which reduce downtime
- **Specific chemical resistance**, including high concentrations of biogenic sulfuric acid
- **Crack-bridging** for gaps of up to 0.7 mm
- **Maximum moisture tolerance**, including application on humid substrate

