



SIKA AT WORK

HEATHGATE ESTATE, NORWICH

REFURBISHMENT: Sika® MonoTop® and Sika® Margel

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SIKA REINFORCES FAILING RESIDENTIAL BUILDINGS WITH QUALITY CONCRETE REPAIR SYSTEM. A [total corrosion management](#) concrete

repair specification from global product supplier, Sika, provided the protective solution for residential buildings' deteriorating exterior to ensure the long-term comfort and safety of its occupants.

Major refurbishment works have been carried out on the Heathgate Estate near Norwich city centre, with works completed on a phased basis, focusing on two residential blocks at a time. The works totalled approximately 70 units, made up of a mix of social and private properties.

Spalled concrete had occurred throughout the 50-year-old buildings, with steel reinforcement exposed in many areas. With the health and safety of the occupants at risk, the buildings' owners, Norwich City Council, required a proven concrete repair and protection system with long-term.



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corrosion control measures to extend the structures service life. Sika offered the total solution.

Specified by main contractors, JB Specialist Refurbishments, the [Sika® MonoTop®](#) repair mortar system is renowned for its simple application, as well as offering superb durability and reinforcement for a range of cementitious and steel applications. A full structural report carried out by engineering firm, Conisbee, outlined the required refurbishment at Heathgate. It revealed large areas of the buildings were in a poor state of disrepair due to corrosion initiated by carbonated concrete.

During initial repairs, which started in February 2016, the buildings' external coatings were removed in the delaminating areas, where the coating was found to be well adhering after adhesion and compatibility tests, these areas remained. Hammer test surveys were also undertaken to ascertain the extent of both visual and non-visual defects and the subsequent repair areas broken out in preparation for reinstatement. The exposed repair area surfaces were applied with Sika® Monotop®-610, a high-performance, one-component, cementitious [polymer-modified primer](#).

[Sika® Monotop®-610](#) simply required mixing with water to provide a superb, reinforcement corrosion protection and bonding primer in preparation for concrete repairs using [Sika® Monotop®-615](#). This [concrete repair mortar](#) – which also requires nothing more than simple water mixture for preparation – is the perfect reinforcement mortar for delaminated, weak, damaged and deteriorated concrete.

To address the carbonation induced corrosion within the concrete which hadn't yet propagated cracking or delamination, [Sika® Margel VPI 580](#), a patented vapour-phase corrosion inhibitor and part of Sika's Total Corrosion Management portfolio, was also installed to all concrete elements.

The [product](#) provides a well-bonded layer of corrosion inhibitor through vapour release within and through the matrix of the concrete to provide protection to the surrounding steel reinforcement, by controlling corrosion from exposure to chlorides, water and oxygen.

[Sikagard®-550 W Elastic](#), a one component plasto-elastic anti-carbonation coating system provided the final application over the existing sound well adhering coating. [Sikagard®-550 W Elastic](#) is solvent-free, and even at low temperatures, offers superb crack-bridging properties in concrete structures.

Alan Burd, Quantity Surveyor at JB Specialists, said: "The failing concrete sections throughout the building required a reliable, robust system which offered easy application and long-term protection for the building. Sika MonoTop is a quality system with a well-established and prove track record.

"It's compatible with Sika's anti-carbonation – and anti-corrosion – systems, so it provides everything required for successful large-scale concrete refurbishment project."

The 26-week refurbishment programme – during which strict health and safety guidelines were enforced as the buildings were occupied whilst repairs were carried out – was completed successfully and to the client's full satisfaction.

Sika's high-performance concrete repair system, which carries a [10-year guarantee](#), has provided peace of mind for Heathgate residents as well as eliminating the long-term risk of costly maintenance works on behalf of Norwich City Council.

For further information call 0800 112 3863.