Case study
Newcastle College

Client: Newcastle College
Engineers: Rok Stonecare
Specialist Applicator: Rok Stonecare
Products Specified: Sika® MonoTop®, Sika® FerroGard® 903 and Sikagard®

This was the second phase of the refurbishment of Rutherford Building – one of the prominent buildings within the Ryehill Campus at Newcastle College. Built on the site of the former Rutherford Grammar School, it is a typical 1960’s reinforced concrete framed structure. The design is identical to the adjacent Trevelyan College Building, with rows of concrete panels finished with white mosaic tiles between the metal casement windows.

Initial problems arose when various tiles on the surface of the panels began to fall therefore presenting a major safety issue to the College and fear that a serious injury could result.

A full survey was sponsored by the College the findings of which were that the reinforced panels were suffering from corrosion damage in various areas caused mainly by lack of concrete cover and the presence of cast in chlorides most likely caused by the type of accelerating admixtures used at the time to create and cure the panels quickly.
The scope of works focussed on the repairs to the concrete frame and panels using our one component polymer modified concrete repair mortars Sika MonoTop 610 and 615 and included the application of our protective corrosion inhibitor Sika FerroGard 903 specifically designed to prevent reinforcement from corroding further and therefore arresting any future concrete spalling.

After all the repairs were completed our Sikagard 545W Elastofil one component pore filler was used to consolidate the tiles and provide a more smooth finish blending in all the repair and non repaired areas.

Finally our decorative elastomeric crack bridging coloured coating system was used Sikagard 550W - This coating system has an independently verified life expectancy (BBA Certification) of 15 years and a track record of usage in excess of 20 years; this will ensure longevity and provide additional cost savings by avoiding unnecessary maintenance.

Sika® Concrete Repair & Protection Systems

Sika is a global market and technology leader in the development and production of specialist products and systems for construction and industry. Repair and Protection of concrete structures is one of Sika’s core competencies. The complete Sika product range includes concrete admixtures, resin flooring and coating systems, all types of waterproofing solutions, sealing, bonding and strengthening systems as well as other materials developed specifically for use in the repair and protection of reinforced concrete structures. These have numerous national and international approvals and Sika products are available worldwide through the local Sika companies and our specialist contracting and distribution partners.

For the past 100 years, Sika has gained extensive experience and expertise in concrete repair and protection with documented references dating back to the 1920’s. Sika provides ALL of the necessary products for the technically correct repair and protection of concrete, ALL fully in accordance with the Principles and Methods defined in European Standards EN 1504. These include systems to repair damage and defects in the concrete and also to repair damage caused by steel reinforcement corrosion.

Sika products and systems are available for use on specific types of structures and general concrete repairs in all different climatic and exposure conditions.

Further information
To assist owners, engineers and contractors with the correct selection of repair principles, methods and then the appropriate products, together with their specification and use, Sika has developed a useful schematic system of approach. This is designed to meet the individual requirements of a structure. For project specific technical advice please contact our technical department on 0800 1123863 or alternatively email: technical@uk.sika.com