DECSEAL® deck coating stands the test of time

West St Car Park gains long-lasting waterproofing solution
Project

DECSEAL® demonstrates long-term protection

A busy town center multi-story car park in Leighton Buzzard, UK is still benefitting from long-term protection, 27 years after the initial application of the DECSEAL® waterproofing and wearing course system. Originally installed in 1989, the system was found to still be well bonded and continuing to perform well in October 2015 when Bedfordshire County Council's contractor returned to carry out further maintenance.

Due to the high performance DECSEAL® system, the refurbishment work to the waterproofing and surfacing systems only required skid and slip resistance to be enhanced with the application of DECSEAL® wearing course to the driving aisles where some wear had occurred over 27 years of use.

The car park, which provides 280 spaces, was constructed in the 1970s using the British Lift Slab method. A partial collapse of the Pipers Row Car Park in Wolverhampton, UK had proven this design's potential for punching shear failure, and the importance that a protective coating plays. After rigorous testing, the West Street Car Park was found to be in good condition, with only a few isolated areas requiring minor repair.

Challenge

Maintaining structural protection

Core tests undertaken by the client had shown there to be minimal chlorides in the concrete, but refurbishment work was needed to replace defective drainage channels, install a new vehicle restraint system and maintain the structural protection in the years to come. The client also chose to add a safe, slip resistant finish.
Solution

Overcoating ability minimizes disruption

Amey - Bedfordshire Highways decided to apply the DECSEAL® fully reinforced deck coating system to two major construction joints connecting the two exposed roof levels on the third roof level, providing enhanced durability and long-term crack bridging performance. Based on unique ESSELAC® advanced resin technology, the DECSEAL® wearing course system was specified for all driving aisles, overlaying the existing wearing course.

Developed by Stirling Lloyd (now GCP Applied Technologies), the DECSEAL® system can be overcoated any number of times and after any length of time, avoiding the need to remove the existing coating. Thanks to this overcoating ability, the cost and duration of the refurbishment work was significantly reduced. In addition, the minimal drive-on times achieved from the new finishes allowed car park spaces to be returned to service quickly, with less revenue lost for the client.

The DECSEAL® repair option also appealed to the client since it meant less dust and noise that could impact local residents. Along with the environmental benefits, this meant reduced manufacture, transportation and disposal costs on the project.

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