Dublin Airport Authority chooses DECSEAL® waterproofing

Cold-applied waterproofing simplifies application

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Project

Airport seeks to expand capacity with minimal disruption

With passenger numbers continuing to rise at Dublin Airport, there was an urgent need to provide additional parking for travelers using Terminal 2. It was important for business users to have convenient access to the terminal, so the decision was made to expand the existing short stay, multi-story car park.

Four new floors would be added to the existing structure, providing an extra 1,400 car parking spaces, which more than doubled the total number of spaces available to 2,500. Most importantly, the multi-story car park needed to remain open throughout the project to minimize disruption, so phasing the work successfully was a priority.

Simple-to-install waterproofing solution needed

Lightweight materials were a key consideration given the multi-story nature of the project. Steel, rather than heavier pre-cast concrete, was used for the main infrastructure, and further lightweight materials were specified.

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Dublin Airport MSCP, Ireland
Balfour Beatty
Ecoflex Surfacing Ltd
DECSEAL® Waterproofing System
To minimize future disruption and avoid maintenance to the busy airport, durability and long-term performance were key criteria for the waterproofing solution. Similarly, with the airport remaining open throughout construction, speed and ease of application and the ability to work in phases around the project’s progression were influencing factors.

Proven waterproofing solution selected for airport expansion

The DECSEAL® system, based on unique ESSELAC® technology, fulfilled all these criteria. Providing long-lasting protection, the DECSEAL® system is also lightweight and helps to reduce the dead load of structures, which was a crucial factor in its choice for this multi-story car park. Being cold, spray applied, the DECSEAL® system eliminates the need for hot works permits.
Developed by Stirling Lloyd (now GCP Applied Technologies), the proven DECSEAL® waterproofing and wearing course system was the go-to product, since its durability had already successfully been used on previous Dublin Airport expansion projects.

On the exposed upper floor of the structure, DECSEAL® FR was applied for greater cracking resistance. The DECSEAL® system was also used to coat the pedestrian walkways in a variety of colors. Overall, 10,500m² of car parking was prepared, primed, embedded and coated in a high performance wearing and waterproofing membrane, while an additional 3,000m² was prepared, primed and applied with DECSEAL® wearing course on internal walkways. Ease of product application contributed to meeting the project’s deadlines, with the first phase on levels three and four taking just six weeks.