

# Waterproofing Solution Ideal for Cork Airport Expansion

Cork Airport Ireland utilizes GCP Technologies' BITUTHENE® and PPREPRUFE® to protect against water, damp and gas.

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Project	Cork Airport Ireland
Client	Aer Rianta
Main Contractor	Rohcon Ltd
Subcontractor/Applicator	Radon Ireland
Structural Engineers	Jacobs International Limited
GCP Solutions	BITUTHENE® waterproofing, PPREPRUFE® waterproofing, SERVIPAK® protection boards, SERVITITE® waterstops

## Project Profile

### Airport construction to expand passenger capacity

A new terminal building was being built at Cork Airport to increase its flow of passengers. The goal of the new terminal was to increase the capacity of passengers from 1.1 million people to 3 million passengers a year, and eventually to expand to support 5 million passengers a year.

In addition to the terminal building, airport construction also included the building of a new multi-story car park capable of holding 600 cars, with access via the airport terminal, as well as a 3,250-space surface car park. Three passenger air bridges were constructed as well as a new fire station. The €144.3 million project expanded the airport to 28,300 m<sup>3</sup>, including 32 new check-in desks.

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## Ensuring airport waterproofing in a damp climate

The airport construction required below ground waterproofing of the basement area, specifically the walls, as well as reinforced concrete columns. Due to a sloping site, the engineers designed below grade drainage under the slab, as it was not a monolithic basement. Therefore, a membrane suitable for application in damp areas was also called for.

To provide resistance against hydrostatic pressure, the construction team needed a network of waterstops, which would be suitable for use as an internally cast waterstop.

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## High performance waterproofing protects new construction

To complete the airport construction to specifications, BITUTHENE®8000 self-adhesive waterproofing membrane was applied to the basement walls and on columns, providing protection against the effects of water, dampness, as well and gas penetration. SERVIPAK® protection boards were applied to the walls to permanently protect the BITUTHENE® membrane.

PREPRUFE®300R pre-applied waterproofing was applied beneath the slab due to its unique ability to adhere to poured concrete, preventing water migration between the structure and membrane. It also provided a high performance vapor barrier and radon gas protection for all below grade construction.

Finally, a network of waterstops provided a comprehensive waterproofing system. SERVITITE® internal waterstops and junctions provided resistance against high hydrostatic pressure, and prevented the ingress of water and moisture through concrete expansion joints.

In addition, GCP provided extensive on-site support and training in the correct installation of the waterproofing membranes and waterstops.

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## Challenge

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## Solution

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Blue360<sup>SM</sup> Product Performance Advantage.

*Because every project, large or small, deserves the best level of protection.*

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