

Cork Airport

Cork, Ireland



Architects impression of the airport terminal

The Site

A new terminal building is being built at Cork airport, to increase its flow of passengers. The new terminal aims to increase the capability of the airport from holding 1.1 million people to 3 million passengers a year, with the capacity to expand & take 5 million passengers a year.

The project also involved the construction of a new multi storey car park, capable of holding 600 cars with access via the airport terminal, as well as a 3,250 space surface car park. In addition, 3-passenger air bridges were constructed and a new fire station. The project worth €144.3 Million, has expanded the airport to 28,300m³, and will also consist of 32 new check-in desks.

'Situated on a sloping site, the engineers designed drainage under the slab, as it was not a monolithic basement. Therefore, a membrane suitable for application in damp areas was also called for.'

The Challenge

The design required waterproofing of the basement area, specifically the walls as well as reinforced concrete columns. Situated on a sloping site, the engineers designed drainage under the slab, as it was not a monolithic basement. Therefore, a membrane suitable for application in damp areas was also called for.

A network of waterstops was also required to provide resistance against hydrostatic pressure, which would be suitable for use as an internally cast waterstop.

The Solution

Grace provided extensive on-site support and training in the correct installation of the waterproofing membranes and waterstops.

Bituthene[®] 8000, a self-adhesive membrane, was applied to the basement walls as well as on columns, providing protection against the effects of water, damp and gas penetration. Servipak[®] protection boards were also applied to the walls in order to permanently protect the Bituthene membrane.

Preprufe[®] 300R was applied beneath the slabs due to its unique ability to adhere to poured concrete, preventing water migration between the structure and membrane.

It was also specified on the basis that it provide vapour proofing to all basement grades in addition to radon gas protection.

A network of waterstops was also specified to provide a comprehensive waterproofing system; Servitite® internal waterstops and junctions provide resistance against high hydrostatic pressure, and when formed in a continuous network, prevent the ingress of water and moisture through concrete expansion joints.



Application of Bituthene to retaining wall

PRODUCTS USED

Preprufe® 300R
Bituthene® 8000
Servipak®
Servitite®

CREDITS

Client: Aer Rianta
Main Contractor: Rohcon Ltd
Subcontractor/ Applicator: Radon Ireland
Structural Engineers: Jacobs international Limited

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