

# Aviva Stadium Reaches New Heights with GCP System

An aesthetically pleasing concrete with superior functional integrity

Project	Aviva Stadium
Owner	Irish Rugby Football Union & Football Association of Ireland
Engineer	Buro Happold
Architect	Populous & Scott Tallon Walker
Readymix Supplier	Kilsaran Concrete
Applicator	Colemac Specialist Contracts
GCP Solutions	HYDRODUCT® Drainage System, TC3 Exposed Aggregate System



## Project Profile

### Supporting Dublin's new sports stadium

Dublin's new international stadium for rugby and football, the Aviva Stadium, officially opened in May 2010. Conceived by the Irish Rugby Football Union, the Football Association of Ireland, and the Irish Government, the stadium construction began on the site of the old Lansdowne Road venue, which was demolished in 2007. It has four tiers and a capacity for 51,700 seated spectators.

The stadium's distinctive roof design, makes it one of the most unique sports stadiums in Ireland. It is shaped in a wave-like manner, which integrates well with the residential area of Dublin.

The TC3 System allowed for the production of a black concrete, similar in appearance to tarmacadam, without posing a threat to the integrity of the HYDRODUCT® Drainage System.

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### Planning stadium construction

During stadium construction, a black concrete with an exposed aggregate finish was required for an external podium deck at the corporate entrance. The original specification stated that the podium deck would be covered with black tarmacadam. However, since the HYDRODUCT® Drainage System was also being employed to remove water from the deck, there was a fear that the hot tarmac would melt the plastic pipes of the HYDRODUCT® drainages when it was laid on top of them and would greatly reduce their effectiveness. The architects wanted to cover the deck with a material that would have the same aesthetic appearance as tarmacadam but would not have an adverse effect on the performance of the HYDRODUCT® Drainage System.

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### Using exposed aggregate concrete finishing

The solution was to use the TC3 Exposed Aggregate System during stadium construction. It allowed for the production of a black concrete with an exposed aggregate finish, which gave a similar appearance and texture to tarmacadam, without posing a threat to the integrity of the drainage system.

TC3 System is an exposed aggregate concrete finishing solution that provides functional and aesthetically pleasing surfaces for both grey and integrally colored concrete applications.

Several laboratory and full-scale trials were carried out on the top surface of the concrete revealed exposed coarse aggregate, ensuring it was suitable. This work was made possible thanks to GCP's Blue360<sup>SM</sup> Total Business Advantage, who provided the products and services needed to optimize the project.

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