

Utilising ADPRUFE[®], UK Shopping Centre Opens On-Time

Integrally waterproof concrete elements make the UK shopping centre watertight.



Project	Westfield Stratford City shopping centre
Owner	Westfield Group
Engineer	Robert Bird Group & Arups
Architect	Fletcher Priest & AHMM
General Contractor	PC Harrington
Applicator	Quickseal (Volkerlaser)
GCP Solutions	ADPRUFE [®] integrally waterproof concrete, PREPRUFE [®] waterproofing, BITUTHENE [®] waterproofing

The Overview

The Project

Located adjacent to the London Olympic Park, Westfield Stratford City shopping centre is one of the largest urban shopping centres in the UK and Europe.

This high profile commercial project for GCP Applied Technologies, involved elements of commercial building construction with over 1.5 million sq ft (139,354 m²) of retail space, tunnelling work for London Underground railways and public exposed terrace areas.

The UK shopping centre, owned by the Westfield Group, opened in September 2011.



"Preprufe® 300R is a unique membrane, consisting of a robust film of high density polyethylene (HDPE), impermeable to water, water vapour and gases, combined with a special multilaminar matrix."

The Challenge

The retail design specified Grade 4 waterproofing protection, with specific requirements for gas protection.

Design requirements were for habitable areas throughout the shopping centre, with considerable external surface areas for public access, together with elements of London Underground tunnel and box areas over the North Ticket Hall roof.

There were also commercial building pressures for the project to be completed in time for the 2011 opening. Many separate parties were involved, requiring close supervision by the GCP team.



For the shopping centre, they used ADPRUFE® integrally waterproof concrete elements to simplify technical aspects, particularly around pile caps, which, in turn, helped to speed up the construction schedule for contractors.

PREPRUFE®300R and BITUTHENE®8000 waterproofing membranes were applied to the basement, slabs, walls, pile caps and external surfaces.

PREPRUFE® and BITUTHENE® membranes are fully and intimately bonded to the structural concrete providing the required grade of waterproofing barrier, and a fully waterproofed system. Both products are suitable for protecting against the effects of water, damp and gas penetration in a commercial building.

About PREPRUFE® and GCP

PREPRUFE®300R is a unique membrane, consisting of a robust film of high density polyethylene (HDPE), impermeable to water, water vapour and gases, combined with a special multilaminar matrix. This matrix on one side of the membrane develops a strong capacity for adhesion when loaded by the pressure of freshly poured concrete during the pouring and successive hardening phases.

GCP has a long established and strong relationship, built over a period of more than 25 years, with the consulting engineers and main and sub-contractors involved with the project. Team members worked together to achieve their aim of securing maximum business potential from the project and were supportive of their customers and each other throughout a complicated process.

Blue360SM Total Business Advantage: The power of GCP products, performance and people.

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