

Westfield Stratford City London, UK



Aerial view of Westfield Stratford City.

The Site

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

This high profile commercial project for Grace, involved elements of public building construction for commercial use with over 1.5 million sq ft of retail space, tunnelling work for London Underground railways and public exposed terrace areas.

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

The Challenge

The design specified Grade 4 waterproofing protection (according to contemporary specifications), with specific requirements for gas protection.

Design requirements were for habitable areas throughout, 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 pressures for the project to be completed in time for the 2011 opening. Many separate parties were involved, requiring close supervision by the Grace team.

The Solution

Grace offered a comprehensive waterproofing system, including 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 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 as a minimum throughout, and integrated to create a fully waterproofed system. Both products specifically used on basement structures, are suitable for protecting against the effects of water, damp and gas penetration.

Preprufe® 300R is a unique membrane of its kind, 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.

Grace 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. Specific 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.



Application of Bituthene 8000

PRODUCTS USED

Preprufe® 300R
Bituthene® 8000
Adprufe™
Procor® 4R

CREDITS

Owner: Westfield Group
Engineer: Robert Bird Group & Arups
Architect: Fletcher Priest & AHMM
General Contractor: PC Harrington
Applicator: Quickseal (Volkerlaser)

www.graceconstruction.com

Grace Construction Products Limited 580-581 Ipswich Road Slough Berkshire SL1 4EQ

Bituthene and Preprufe are registered trademarks of W. R. Grace & Co.-Conn.

The information given is based on data and knowledge considered to be true and accurate and is offered for the user's consideration, investigation and verification. Since the conditions of use are beyond our control we do not warrant the results to be obtained. Please read all statements, recommendations or suggestions in conjunction with our conditions of sale including those limiting warranties and remedies which apply to all goods supplied by us. No statement, recommendation or suggestion is intended for any use which would violate or infringe statutory obligations or any rights belonging to a third party.

These products may be covered by patents or patents pending.

Copyright 2012. Grace Construction Products Ltd UKPP023 Printed in UK 02/12

GRACE