

Case Study

The Walbrook Building



The challenge:

To design a drainage system that would blend with the building's striking curved façade to convey rainwater efficiently.

The approach:

To provide a system that was both efficient and would reflect the styling and architectural quality of the building's unique curved exterior façade.



The product:

In total, 55 metres of bespoke stainless steel discrete slot channels with 50mm wide Heelsafe stainless steel gratings and 300mm by 300mm polymer concrete carrier channels.

The Walbrook Building

One of London's newest buildings, The Walbrook Building leads the way with cutting edge design combined with a host of energy efficient features that takes building construction firmly into the 21st century. Designing a drainage system that would blend with the building's striking curved façade to convey rainwater efficiently, posed a real challenge for drainage specialists ACO Building Drainage.

Situated in the heart of the city, The Walbrook Building lies in a prominent position directly opposite Cannon Street station and adjacent to Christopher Wren's church of St Stephen Walbrook. This landmark nine storey building was developed by Minerva Plc and designed by internationally renowned architects Foster + Partners and comprises in total some 445,000 square feet of air-conditioned offices, incorporating two atria together with premium retail areas.

The architects wanted a reliable rainwater drainage system at ground level that would complement the contemporary design of the building. So they turned to drainage specialists ACO Building Drainage to provide a system that was both efficient and would reflect the styling and architectural quality of the building's unique curved exterior façade.

The drainage system needed to fit around the major exterior design elements of the building, comprising the perimeter external steel columns which are wrapped with highly reflective fibre reinforced cladding, supporting an extensive array of brise soleil which provides the solar shading for the building. Fortunately, the ACO Building Drainage team's experience of working on prestigious projects with a high design element proved crucial, providing Grontmij (Building Services Consultants) and building sub-contractor Gormley with a reliable and functional solution.

To complement the building's use of innovative materials, ACO Building Drainage used stainless steel discrete slot channels with 50mm wide Heelsafe stainless steel gratings. The unobtrusive design of the system provided the ideal solution for use adjacent to the façade of the building. To accommodate the sloping pavement surface around the building it was necessary for the channels to be bespoke manufactured to incorporate a three dimensional design. This ensured full control was maintained in quality control and in conformity to the tight tolerances required in blending with the curved pavement design.

The channels were supplied in three metre long sections and due to the unique channel fitting and positioning, the system dimensions were taken directly from the contractor's drawings. Each section was then assigned a unique serial number to ensure that the installation was carried out correctly and avoided any confusion over parts saving on subsequent delays.

Visible gratings, manufactured from 7mm triangular wires welded to bars in 304 grade stainless steel, were used to cover each channel body not only for aesthetic purposes but also for the more practical purpose of preventing larger foreign objects entering the system that could lead to blockages. The gratings have a continuous 5.5mm slot design to prevent wash-over situations, especially during heavy downpours, and therefore avoid unsightly and hazardous rainwater overflow issues.

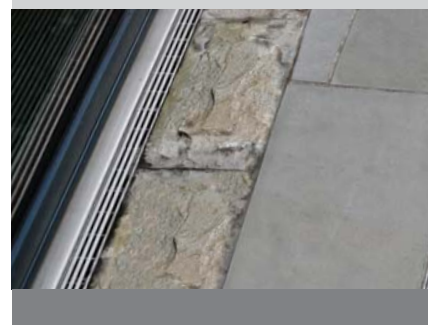
In total, 55 metres of discrete slot channels were installed around the perimeter of the building. Set out in two separate runs, each discharges rainwater into large 300mm by 300mm polymer concrete carrier channels supplied by ACO Technic. Covering a total distance of 400 metres around the perimeter of the building, these high capacity channels are closed topped and designed to be integrated under the surface pavement allowing rainwater to move quickly and efficiently into the building drainage system.

A spokesperson from one of the practices involved in this project commented, *"Installing any bespoke rainwater system on a project of this scale is a challenging undertaking in itself, without the additional design considerations that had to be met for The Walbrook Building project. Choosing the ACO Building Drainage channel and grating system and carrier channels from the bespoke product range proved to be the right choice. The quality of the system and the range of components, the channel's design, and also the support we received from the ACO team helped us immensely in successfully, and most importantly, meeting the challenging construction programme, as well as completing the installation on time and to the required high standard."*



In Brief:

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For more information on our bespoke design and fabrication services, contact ACO Building Drainage on 01462 816666 or email buildingdrainage@aco.co.uk.

A full overview of ACO Building Drainage products and resources is available at www.acobuildingdrainage.co.uk.