

## ACO helps redevelopment of King's Cross get on track

*ACO's drainage systems provides efficient surface water management to many of the redeveloped public areas*



*Photo by John Sturrock*

ACO Water Management's drainage solutions have been installed throughout the redevelopment of King's Cross. As well as meeting site-specific requirements, aesthetically these installations are a great example of urban surface design.

Thousands of passengers use the 7,000m<sup>2</sup> King's Cross Square outside King's Cross Station every day, which sits just 500mm above the roof of the London Underground ticket hall. The square was designed to be as flat as possible, with just a 500-600mm fall, and this presented a real challenge when it came to designing the correct drainage solution.

With gulleys rejected due to the increase in variation of gradients required and the hazard they present to heeled shoes, a much more unobtrusive solution in ACO's MultiDrain channels was chosen for the perimeter of the square, to prevent water run-off reaching the public thoroughway. These also

incorporated ACO's Heelsafe stainless steel grates for added safety.

Within the square itself, MultiDrain was again used, this time featuring Twin Offset Brickslots, channelling the water into a network of underground pipes and chambers that store the water before it is discharged into the Fleet Street sewer. The channel and ACO Brickslot grating together provide an unobtrusive continuous slot drainage system with high hydraulic efficiency for fast removal of surface water. From a design perspective, this solution also gives a great surface finish particularly with the grating being in stainless steel.

**Project:**

Kings's Cross redevelopment.

**Objective:**

Provide efficient, reliable surface water management which complements the design and feel of each urban space.

**Solution:**

A selection of bespoke and standard drainage systems satisfy the varying hydraulic requirements over the different sites.



The drainage design for the square was also presented with the issue that the surface levels fall in the opposite direction to the outlet. Through collaboration between the designer and ACO, a solution was created where the upstand of the slot had a gradual increase in height per unit to ensure the drainage system runs level with the surface; each TwinSlot Brickslot was individual in design.

Nearby, Granary Square, with in the 67 acre generation site was another major project, which needed a discreet and effective water management solution that could meet the aesthetic and hydraulic requirements of the site. The square features a four large surface fountain in the centre, with 1080 individual jets of water.

Again, with designing on the surface being key, ACO's solution was its MultiDrain Brickslot channel drainage system, a visually subtle solution that provided high hydraulic efficiency and enabled rapid removal of the surface water. The Brickslot grating system is also completely secure and is not vulnerable to vandalism or coming loose, making it ideal for use in a communal area. Bespoke to the area, ACO designed a Brickslot grating with a 40mm profile for installation in the square, rather than the standard 105mm, so that the stone paving could cover the drainage slot to achieve the desired aesthetics.

ACO Water Management's MultiDrain channels were also used at Pancras Square and Cubitt Square as part of the redevelopment of the King's

Cross' area. Water is a key feature of Pancras Square, which has been called the 'gateway to King's Cross' and was inspired by the design of a continental town square. Cubitt Square, the newly opened public space, was designed with the community in mind, holding various events, from markets to outdoor cinemas. The use of ACO's MultiDrain product ensured a discreet drainage solution for the spaces that was unobtrusive and did not take away from the overall design. The channels also effectively controlled the water away from the main public areas, preventing flooding.

Commenting on ACO's work on the King's Cross site, David Burtenshaw at ACO said: "Each area on the King's Cross site had its own hydraulic requirements and central to this was the need for products that complement the design and feel of the urban space. With ACO's wide ranging water management systems, we were able to meet and exceed these with our MultiDrain channels and various grating options, providing aesthetically pleasing and high performing solutions."



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