Case Study

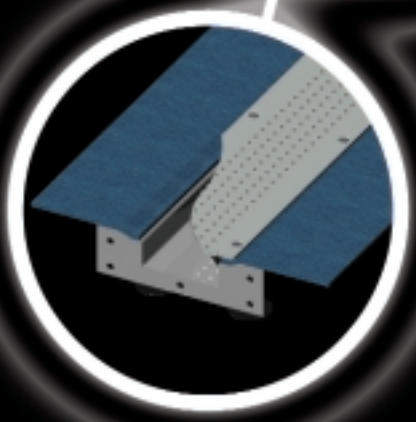
The Mailbox, Birmingham

The Challenge:

To develop an attractive, high performance channel drainage solution to replace an inadequate point gully system serving prestigious walkways and balconies.

The Approach:

The creation of a flexible channel that was manufactured to the tightest tolerances to accommodate the existing infrastructure and to enhance the visual setting.



The Product:

A modular-based, full stainless steel shallow-invert system with slip resistant brushed stainless steel gratings.

ACO *building drainage*

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The Mailbox, Birmingham

The Mailbox, one of central Birmingham's landmark residential developments, has turned to ACO Building Drainage for an innovative, made-to-measure drainage solution capable of solving a critical problem on its walkways and terraces.

Birmingham's former central postal sorting office, The Mailbox, has been successfully converted into a combined commercial and residential complex that is now home to some of the country's most glamorous retail outlets, hotels, restaurants and apartments.

The 1.5 million square foot development has a newly built, four-storey residential block to the rear of the original façade. Open walkways around the first three floors allow a clear an unobstructed view through the complex, creating a striking visual environment.

After several months in operation, the characteristics and capacity of the original point gully drainage system serving the exposed walkways on the first and second floors was found to be insufficient, leaving standing water pools.

Consulting architects, Aedas Architects Ltd, were brought in to seek a solution. The visual sensitivity of the area, the limited available depth in the walkway and the fact that the new system would have to tie in with the existing gully locations all presented significant challenges.

"*We recognised that there was no off-the-shelf system available that could meet the requirements,*" says Peter Chapman of Aedas Architects. "*The conventional view of bespoke systems is that they are extremely expensive to manufacture, complicated to install and difficult to maintain. After close consultation with the design team at ACO Building Drainage, we were completely confident that their proposed solution would avoid any such problems and deliver an affordable system that would exceed the performance and aesthetic characteristics we were seeking.*"

On the first floor, ACO's system links the existing gully points via straight runs of stainless steel channel. 100mm wide and manufactured in 3m lengths, the installed channel is only 38mm deep and provides a continuous, unbroken drainage line that effectively collects all surface water. Accurate control of the fabrication process has ensured that a consistent depth is precisely maintained throughout the channel, preventing any accumulation of standing water in the run itself and ensuring that can be easily accommodated within the existing floor without any expensive remedial work.

This close control during fabrication has also ensured that the installed runs produce the dead straight finish that is vital in preserving the high visual quality of the area.

On the ground floor, identical grade 304 stainless steel channels and gratings were installed to produce the same high performance and visual finish. On this floor, however, the existing gullies were located between the pillars supporting the overhead walkways, preventing the uses of a straight connecting run of channel.

ACO's solution offsets the main channel run so that it runs alongside the pillars with short, equal length spurs connecting the channel to the gullies. Every spur is made up of an identical single 'T' piece channel with a 300mm grating. The top section of T that connects with the straight channel units was manufactured to be 20mm too long. This allowed the T to be easily and precisely aligned with the gully point and trimmed to ensure that the gratings could be fixed to meet the strict tolerances on finished appearance.

In Brief:

- A landmark redevelopment project in the heart of Birmingham.
- Existing point gully system caused surface water ponding – a dangerous slip hazard and visually unattractive to residents.
- Fully bespoke drainage solution developed in consultation with Aedas Architects Ltd.
- Total of 500m of shallow (38mm) channel installed within balconies and walkways.

ACO building drainage

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