

## Aberdeen International Business Park Gets Sustainable SuDS Treatment with Hydro's Pollution Control Technology

### Project profile

#### Objective

To deliver a best-practice Sustainable Drainage (SuDS) scheme using filtration and bioretention technologies to meet strict planning and pollutant removal criteria.

#### Solution

Six Hydro Biofilter™ units installed in a landscaped courtyard garden and four Up-Flo™ filtration units installed in concrete manholes to treat runoff from the 1,197 space car park.

### Product profile

#### Up-Flo™ Filter

The Up-Flo™ Filter is an advanced stormwater treatment solution that combines sedimentation and screening with fluidised bed filtration to deliver exceptional surface water pollution removal.

#### Hydro Biofilter™

Hydro Biofilter™ combines the simplicity of SuDS with the sophistication of smart engineering in a high-amenity biofiltration system that uses soil and filter media to treat an assortment of coarse, fine and dissolved stormwater pollutants.

Aberdeen's new International Business Park, built next to the City's International Airport, is delivering a best-practice Sustainable Drainage (SuDS) scheme using filtration and bioretention technologies from Hydro International to meet strict planning and pollutant removal criteria.

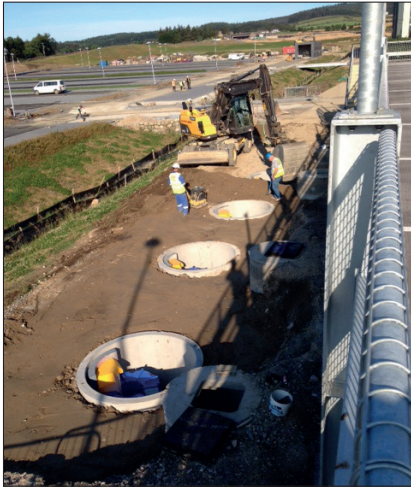
A wide-variety of SuDS components have been included for the 31,000 m<sup>2</sup> first phase of the development to meet the level of treatment required by the Scottish Environmental Protection Agency (SEPA) to help protect the water quality of the River Dee, a well-known salmon river.

To meet stringent planning requirements, consultants Mott MacDonald selected Hydro International's unique Up-Flo™ filtration units and Hydro Biofilter™ biofiltration units for key parts of the site.



"SEPA required two levels of pollution control in the drainage treatment train for some areas of the site," explains project engineer Nick Watson of Mott MacDonald. "The six Hydro Biofilter™ units are installed in a landscaped courtyard garden around three linked four-storey commercial blocks. There is also a two-storey 1,197 space car park and runoff from its draining surface is treated via four Up-Flo™ Filters in concrete manholes.

"Space constraints meant that finding small footprint solutions that could achieve high treatment levels was limited. There are some occasions where the more natural engineering approach is less suitable due to a lack of space and having an option like Up-Flo™ can be useful," continues Nick Watson.



The Hydro Up-Flo™ Filter units will remove fine sediments, hydrocarbons and other pollutants from the car park runoff. They provide a high-performance multi-stage treatment train in a single device by combining sedimentation and screening with fluidised-bed filtration technology.



The Hydro Biofilter™ is a biofiltration device that looks like a normal tree or shrub planted through a grate. Underneath, a pre-cast concrete chamber contains a layer of enhanced mulch and a soil filter medium to deliver high levels of surface water treatment before the water is discharged into the drainage system.

The flush profile of the Hydro Biofilter™ grate, with its tree-planting feature, is used to treat general pollutants in the runoff from the courtyard, which covers about 0.3 hectares. The runoff is also passed through filter trenches to provide the two levels of treatment required by SEPA.



The topography of the area is fairly flat with a small local watercourse rerouted to facilitate site development. The mixed drainage scheme for the development also includes a variety of SuDS measures including filter strips, permeable pavement, filter trenches and soakaways and an attenuation tank under the car park to meet SEPA's requirements. The runoff discharges into the Green Burn, via which water eventually ends up in the River Dee.

The 16.2 hectare site Aberdeen International Business Park being constructed by Bowmer and Kirkland for Abstract (Cornwall) Ltd is strategically located on the principal link road between the Airport and the Aberdeen Western Perimeter Route /A96 and will provide well-located facilities with high-standards of office accommodation for the international business community in Aberdeen.

As well as office, restaurant and leisure facilities, future plans include hotel accommodation. In keeping with Aberdeen Airport's strong oil industry connections with other North Sea bordering countries, Phase 1 has been leased to a leading Norway investment provider Aker Solutions, for whom the Abstract Group of Companies is developing the site.

## Learn more

To learn more about how the Up-Flo™ Filter or Hydro Biofilter™ can help you to manage water more effectively, visit [hydro-int.com](https://hydro-int.com), search **Up-Flo Filter** or **Hydro Biofilter** online or contact us:

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