

CSO Case Study

Heliscreen® Upgrades Under-Street CSOs

Hydro
International
turning water around ...

Project Profile:

- Watercourse protection.
- Installations underneath Carlisle Street and Atlas Works.
- Retrofit into existing chambers.
- Supply included stainless steel flow channels.

Product Profile:

- Self-cleansing - by rotating helical brushes.
- All screenings retained on foul side of the weir.
- Low headloss.
- Operates under surcharged conditions.

Two recently completed Combined Sewer Overflow upgrade projects in urban Sheffield demonstrate the versatility of Hydro's Heliscreen® in assisting the Yorkshire Water Services Ltd AMP3 programme to improve the city's water quality to the Environment Agency's standards. At the Atlas Works and Carlisle Street sites, twin Heliscreen®s were retrofitted into existing chambers under the road surface.

Both projects were designed to improve existing CSO arrangements. During heavy rainfall the chamber overflowed into the watercourse causing pollution by visually offensive material.

To upgrade this to a positive screening method, at an economical cost, Yorkshire Water installed twin patented Heliscreen®s in double high-sided weirs. Both units were supplied with bespoke stainless steel flow channels which enabled complete mechanical installation within one day with minimal civil work.



Carlisle Street Heliscreen® installed in the chamber.

The Atlas Works installation under an urban road comprised two 700 x 2500 mm units with a maximum inlet flow of 1593 l/s (1 in 5 year) and a maximum screened flow of 1328 l/s (1 in 5 year).

The Carlisle Street Heliscreen® installation is under a highway and the two 500 x 5000 mm units are designed for a maximum inlet flow of 2804 l/s (1 in 5 year) and a maximum screened flow of 2015 l/s (1 in 5 year).

Yorkshire Water's Contracts Manager, Peter Myerscough, commented: "The Heliscreen® is an efficient, versatile and cost-effective unit. The bespoke Heliscreen® installations at Carlisle Street and Atlas Works were completed on time and within our normal 10-12 week delivery period".



Carlisle Street Heliscreen® awaiting installation.

Hydro International's patented Heliscreen® is a self-cleansing, low head loss screening device that protects CSO outfalls by retaining all matter greater than 6 mm (in 2 directions) in the foul continuation flow to the treatment works. The robust, minimal maintenance Heliscreen® works effectively even in totally flooded chambers with surcharged outflow pipes and is able to handle high screening concentrations.

The main contractor on the Atlas Works and Carlisle Street sites was ETM.

Hydro International offer a complete range of screening and treatment devices for combined sewer overflows. These include:

- Hydro-Static® Screen - Simple screening.
- Hydro-Jet® Screen - Non-powered, self-cleansing screening.
- Storm King® Overflow with Swirl-Cleanse™ Screen - Storage, treatment and screening.

This information is for guidance only and not intended to form part of a contract. Hydro International pursues a policy of continual product development and reserves the right to amend specifications without prior notice. Equipment is patented in countries throughout the world.

Hydro International
Shearwater House
Clevedon hall Estate
Victoria Road
Clevedon • BS21 7RD
Tel: 01275 878371
Fax: 01275 874979
enquiries@hydro-international.co.uk
www.hydro-international.biz

© Hydro International 2003

HFI ICS01 A11003

