



New-Build Cast In-Situ Concrete Chamber

Hydro-Jet™ Screen Raises Performance Levels for Screening at Wishaw, Lanarkshire for West of Scotland Water Authority

Project Profile:

- Watercourse protection.
- New CSO chamber construction.
- Unobtrusive installation out of sight of local residents.
- Installation of Hydro-Jet Screen™ in under 2 days.

Product Profile:

- No moving parts.
- No power required.
- Exceeds current requirements.
- Self-cleansing.
- Self-activating.
- Minimal maintenance.

Hydro's award-winning Hydro-Jet™ Screen combined sewer overflow (CSO) has been used by West of Scotland Water Authority to replace the existing overflow at a residential housing development in Wishaw, Lanarkshire. The problem of unsightly aesthetic materials appearing in the receiving watercourse and the build-up of deposits had caused local residents to complain.

In reviewing the design of this combined sewer overflow, a new chamber was constructed to house the Hydro-Jet™ Screen, and the complete installation (adjacent to the main road and footpath) was hidden from public view by access covers.



The system is not only unobtrusive, it also delivers screening capability in excess of the "6 mm in two direction" consent, issued by the Scottish Environment Protection Agency (SEPA), designed to ensure that offensive aesthetic material are eliminated from the watercourse*.

The Hydro-Jet™ Screen is unique in that it requires no power to operate and has no moving parts and is self-cleansing. A patented air break siphon is used to generate a rising and falling water level through the screen to free screenings, which are directed to the treatment works, and discharge the screened water to the watercourse. This feature ensures low life-cycle costs and reduces the costs and routine maintenance worries associated with powered screens.

The fact that the system does not require any instrumentation or control panels removed the Authority's fears about public health and safety and the risk of vandalism.



Working in association with Hydro, West of Scotland Water Authority has found a solution to a sensitive issue. Discrete, completely automatic and self-cleansing, the Hydro-Jet™ Screen meets the Water Authority objectives in terms of competitive, whole-life costs, low environmental impact and quality of screening.

**Independent researchers evaluated the device at the National CSO test facility, concluding that "in all tests, no particles greater than 6 mm in two dimensions were observed in the spilled flow".*

This case study forms part of a series demonstrating the flexibility, cost-effectiveness and extended track record of the Hydro-Jet™ Screen. Other case studies include:



Retrofit to Existing CSO Chamber



Package Unit



New-Build Rotary Unit with Storm King®



Retrofit to Storm King®