



Northern Ireland Water Upgrades Enniskillen WWTP with MS[®] Bar Screens

Background

In 2007, a consortium formed by the UK contracting firms Enpure and Lagan initiated the construction of a new plant in the existing site of Enniskillen WWTP.

Challenges

An important objective with this project was to solve some of the operational problems faced at the old plant. The problems included constant blockages of pumps and pipelines and also ragging accumulation in the aeration lanes. All of this was caused by inadequate screening equipment.

As part of the preliminary design, the engineers considered utilizing screens with 6mm, “2-directional” circular openings, such as band screens, as the only screening system. Having experienced serious operational and maintenance issues first-hand at some of the local plants with this type of equipment in the past, Mr. Michael McAlary, Regional Operations Manager for NI Water, was interested in finding a better solution to achieve NI Water’s screening capturing requirements, while at the same time having a robust and reliable screen that would withstand the toughest conditions for many years.

Customer: Northern Ireland Water

KEY FACTS

- **Channel Depth:** 2m
- **Channel Width:** 1m
- **Max Flow per Screen:** 830 L/s
- **Number of Screens:** 2
- **Bar Spacing:** 4 mm
- **Type of Flow:** combined municipal sewer and storm flow
- **Coarse Screens Upstream:** none
- **Material:** SS 304
- **Additional HW Equipment:** Dual Screw Conveying, washing and compacting system

Process

After a series of technical meetings and visits to plants where Headworks' MS Bar Screens® were successfully operating for more than 10 years, Northern Ireland Water decided to go ahead with Headworks. Two Headworks MS Bar Screens with 4mm openings were installed and commissioned at the new Enniskillen WTP in March 2009, along with a Headworks dual screw conveying and washing/compacting system.

Solution

The Headworks 4mm screens have been successfully operating since then, each one performing both coarse screening and fine screening functions all in one.

In discussing the improvement in the new system operations over that of the old plant, Michael McAlary stated that "at this moment all the issues and problems we had with blockages and rag accumulations seem to have been resolved". He further stated his pleasure in the efficiency of the capture rate with the new screens, commenting that "the capture rate of the 4mm bar screens is of similar ratio when compared to 6mm 2-directional screens".

All of this is possible due to Headworks' unique combination of robustness, reliability and precision in the design and manufacturing of high-quality screening equipment.

" NI Water bought the Headworks screen based not on cost alone but whole life longevity. I wanted a robust and simple to-maintain screen with a proven track record. For too long I have been purchasing inlet screens and replacing fundamental and critical parts after as short a time as two years, sometimes with delays in receiving these parts. I needed something in a screen that was tough and easy to maintain. I seem to have received it from Headworks! "

- Michael McAlary

*Regional Operations Manager at Northern
Ireland Water*

