



MS[®] Bar Screens Replace Two-Stage Screening System

Background

In 2004, the Department for Regional Development announced plans to upgrade the Limavady Wastewater Treatment Works, which was part of a 28 million dollar capital works program in Northern Ireland. Shaun Woodward, Regional Development Minister said, "Significant investment is required to upgrade water and wastewater infrastructure in Northern Ireland to protect public health, ensure cleaner beaches, safeguard the environment, and respond to increasing demand."

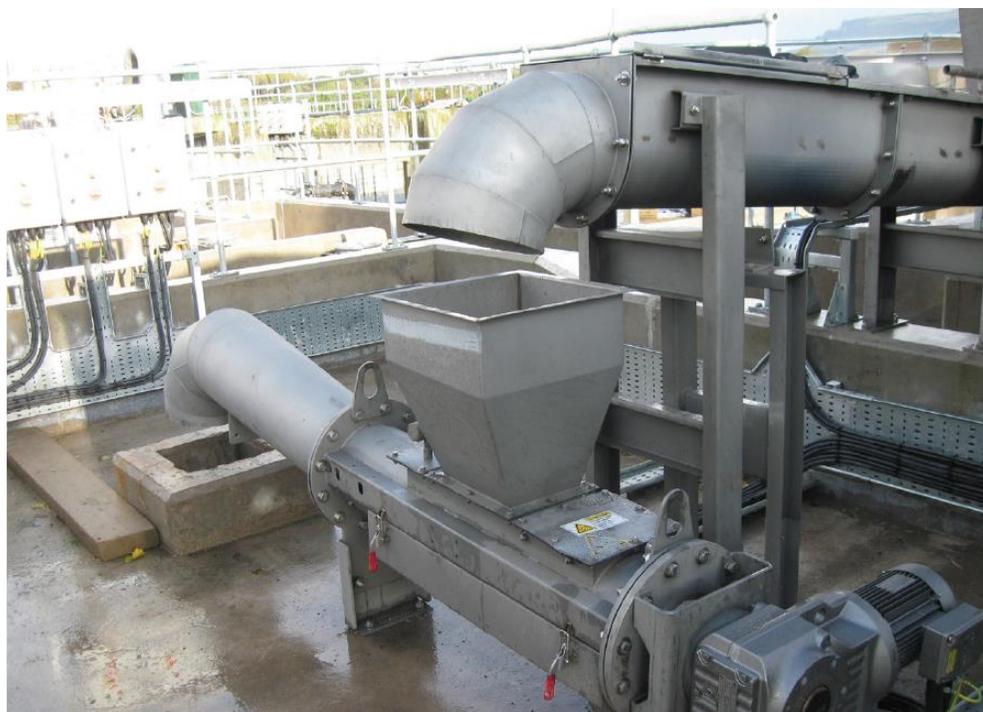
As part of the upgrade, Northern Ireland Water (NIW), the local water authority, found it necessary to search for equipment that would hold up to the task of handling the remarkable amount of screenings brought in by the high quantity of rainwater flowing into the combined sewer system. In particular, problems often occurred at the headworks portion of the treatment plants due to the first flush of heavy rainstorms. NIW knew that only a very heavy duty screen at the front of a treatment facility could hold up to the beating and capture the rubbish flowing in from the deluge without jamming. NIW also had to abide by UK screenings capture requirements.

QUALITY THAT NEVER QUILTS™

Customer: Limavady Wastewater
Treatment Works
Industry: Municipal

KEY FACTS

- **Contractor:** Williams Industrial
- **Number of Screens:** 2
- **Channel Depth:** 1.75 m (5.74 ft)
- **Channel Width:** 1 m (3.28 ft)
- **Bar Spacing:** 4 mm (0.16 in)
- **Max Flow Per Screen:** 480 L/s (127 gal/s)
- **Coarse Screens Upstream:** No
- **Material:** SS304
- **Equipment:** Totally Enclosed for Odor Control



A Transportor™ and Screwfactor™ convey, wash, and compact debris from both MS Bar Screens

Why NIW chose Headworks

The Limavady WWTP was part of the upgrade plan to replace old non-working screens. Originally, the plant was planning to replace the old screens with 6 mm perforated plate screens, which was the standard screen of the United Kingdom and Ireland at the time. However, through the installation of the MS Bar Screen at another NIW facility, Headworks® Inc. was able to demonstrate firsthand the high capture rate that a 4 mm bar screen could achieve. The robust, durable construction of the MS Bar Screen had the ability to withstand coarse screen abuse while delivering fine screen results. Seeing the screen in action, NIW officials agreed that the Headworks screen was the only screen fit for the challenges faced at the Limavady facility.

Solution

Williams Industrial Services, the contractor awarded the project, installed two 4 mm MS Bar screens into a channel depth of 1.75 m by 1 m wide. They attached a Transporter™ and Screwfactor™ for conveying, washing, and compacting debris from both screens. The installation of the screens was successful and the client is very pleased that they have eliminated the need for a two-stage screening system.

These MS Bar screens hold up to debris like a coarse screen with peak flows of 480 L/s. Paul Davison, Project Sponsor at NIW remarked, "Since their installation, the screens have gone through several storm events without ever jamming. The volume of

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screenings captured at Limavady is significantly greater than had been previously removed. Additionally, the headloss is considerably less than anticipated. So far, the screen's performance is very good." Since the installation of Limavady in late 2008, NIW has accepted Headworks MS Bar screens for two additional projects.

Few facilities in the world are in an environment that receives 40 to 50 inches of rain each year, but even with the torrents of water and heavy debris that result from the "first flush" of heavy rainstorms, Headworks has provided equipment proven to last for decades with very little maintenance.

