

CASE STUDY

Pump Action Screen (PAS) at Nelson Airport

DECEMBER 2020

BACKGROUND

Nelson Airport CSO had a requirement for a 1 No. semicircular screen adjacent to the weir to remove screenings from storm overflow. A wash system must be installed to remove screenings from the screen and retain the into the forward flow to the treatment works and its screening system. Browns Brothers Engineers were approached by BECA to design, manufacture and supply a Pump Action Screen equipped with a submersible pump and an air entrapment venturi system.

INSTALLATION

The Pump Action Screen (PAS) is a simple and robust CSO mechanical screen which consists of a half round Stainless Steel basket with 6mm perforations, submersible pump, distribution pipework and a venturi. It is designed to prevent the discharge of non-biodegradable solids greater than 6mm in two directions. The screening debris is scoured from the underside of the screen basket and punched passed the end of the screen eliminating potential representation.

After every storm even the screen should be visually inspected to ensure the pump is operational and the screen basket has been cleaned effectively. The screen has no moving or maintainable parts. The pump is installed on a guide rail system for easy maintenance outside the chamber.

**SITE:**

Nelson Airport

CLIENT:Nelson Regional Sewerage
Business Unit (N.R.S.B.U)**CONTRACTOR:**

NELMAC

Consulting Engineers:

BECA

FLOWS:

Spill flow: 304 l/s

MODEL:

PAS 300

SCREEN SIZE:

PAS 300 x 2500

SCREEN PERFORATION:

6 mm

PUMP:

1 No. Flygt 4.7 kW

MATERIAL:

304 Stainless Steel

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