

Case Study:

Pump Action Screen (PAS) - Mechanical Screen

Site: Pontardowe - Dilwyn Arms
Client: Welsh Water
Application: CSO
Completion Date: April 2007

Key Project Partners:
Client: Welsh Water
Consulting Engineers: Welsh Water/Imtech Process
Main Contractor: Imtech Process



Scope of Contract:

Design, supply, install and commission 1 No. Pump Action Screen for Dilwyn Arms CSO.



▲ Single screen arrangement

▲ Scouring action during the cleaning stage of the Pump Action Screen

Background:

Imtech Process approached CSO Group with a requirement for a mechanical CSO screen to handle normal and storm flows at the Pontardowe Dilwyn Arms Pumping Station.

Operational Description:

The PAS is installed on the flow side of the overflow weir and is not operation during dry weather flow. As the water level rises to the underside of the screen, an ultrasonic head detects the level and sends a signal via the control panel to start the pump.

Once the pump has started it then drives the water passed a Venturi that entrains air into the flow. The air and water are combined in the mixing section, prior to entering the screen basket. The air/water mixture scours the underneath of the screen removing debris and preventing the screen from blinding.

The power of the scouring action transports the screening debris passed the end of the screen keeping then in the continuation flow. Once the flow has subsided, a second signal from the ultrasonic unit

switches the pump off.

Project Details:

Spill Flow:	362 l/s
Screen Size:	PAS500 x 1700
Pump:	Flygt
Material:	304 Stainless Steel

NZ Distributor:



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